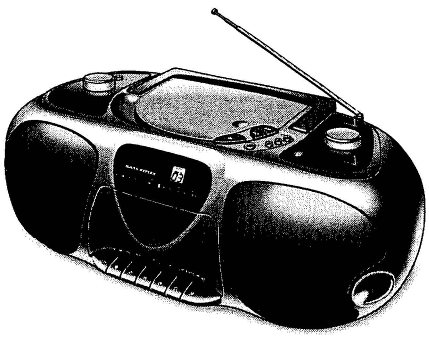
CD Stereo Radio Recorder

AZ8050/10/17
AZ8051/01
AZ8052/00/14
AZ8150/17

Service
Service
Service



Service Manual

COMPACT
disc
DIGITAL AUDIO

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COMBI BOARD

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COMBI BOARD

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Service Manual *CD drive* ***RCD1.3D***

**CLASS 1
LASER PRODUCT**

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PHILIPS

TECHNICAL SPECIFICATION

General:

Mains voltage : 220V-230V / 50Hz for /00 /14
230V-240V / 50Hz for /05 /10
110V-127V / 220V-240V /50Hz switchable for /01
120V / 60Hz for /17
100V / 50Hz for /06

Battery : 9V (6xR20)

Power consumption : ≤ 20W at maximum output power
≤ 5W in stand by

Amplifier:

Power stage protection : temperature and shortcircuit

Output power mains : 2 x 1,6W_{rms} -1dB at 4W D=10%
battery : 2 x 1,6W_{rms} -1dB at 4W D=10%
Headphone : 3,5mm stereo jack, ≥ 20mW at 32Ω (≡ 0,8V at 32Ω) D=10%

Frequency response : 30Hz - 16kHz (typ. at volume set to -20dB, CD mode 0dB signal level ⇒use SBC429)

Tone control
DBB1) : +10dB at 100Hz (volume set to -20dB)

Equalizer1)
100Hz : ±8dB
1kHz : ±8dB
10kHz : ±8dB

Tuner:

	FM	MW	LW1)
Tuning range	87,5 - 108 MHz (65 - 108 MHz for /14) (76 - 108 MHz for /06)	525 - 1607 kHz (530 - 1710 kHz for /01/17)	148,5 - 284 kHz
IF	10,7 MHz ± 20 kHz	468 kHz ± 3 kHz	468 kHz ± 3 kHz
Sensitivity Mono: 26dB S/N, m=30%	≤ 4 µV (≤ 2µV typ.)	≤ 4mV/m (≤ 1,5mV/m typ.)	≤ 6mV/m (≤ 4,5mV/m typ.)
-3 dB limiting point	≤ 5 µV (≤ 2µV typ.)		
AFC capture range	±300kHz		
Distortion	≤ 7% (≤ 1% typ.) RF=1mV Δf=75kHz	≤ 7% (≤ 3% typ.) RF=100mV/m m=80%	≤ 7% (≤ 3% typ.) RF=100mV/m m=80%
Image rejection ratio	≥ 20dB (26dB typ.)	≥ 28dB	≥ 30dB
Channel separation at 1kHz	≥ 20dB (25dB typ.)		

CD:

To be measured on phone socket with 100kΩ load.

Frequency response : 30 - 16.000 Hz -3dB
Signal/Noise ratio : ≥ 80dB
Distortion : ≤ 0.3% at 1 kHz
Channel difference : ≤ 3dB at 1 kHz
Channel crosstalk : 35dB max.
De emphasis : 0 or 15/50µs switched automatically by subcode on the disc

Laser
Output power : 500µW
Wave length : 780 ± 20 nm

Recorder: To be measured on phone socket with 100kΩ load.

Tape speed	: 4,76cm/s ±3%
Wow & Flutter	: ≤ 0,5% weighted
Winding speed	: 130s for C60 cassette
Erase / Bias system	: permanent magnetic erase head / AC 60 ±5kHz
Distortion at 250 nWb/m	: ≤ 7%
Signal/Noise ratio (FF weighted)	: ≥ 40dB
(A - weighted)	: ≥ 43dB
Channel difference at PB	: ≤ 3dB
Channel difference overall	: ≤ 5dB
Channel separation	: ≥ 15dB at 1kHz
Track separation	: ≥ 55dB at 1kHz

Frequency response IEC I	
PB	: 125Hz - 8000Hz (within 8dB)
overall	: 250Hz - 6300Hz (within 8dB)

note: set is not prepared to play or record _IEC II Chrome_ cassettes!

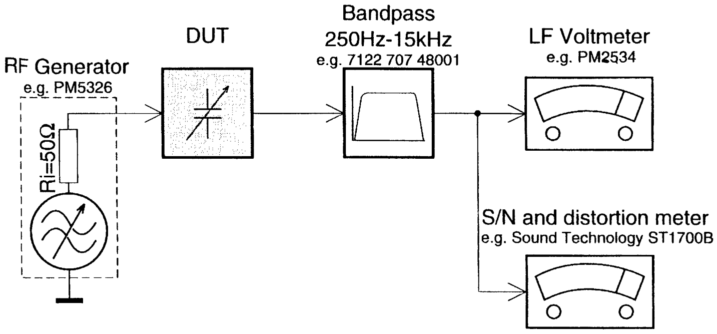
[1]***Remote Control:*** **RC5 commands**

Remote Control key	System Code	Command CODE
PLAY	21	53
STOP	21	54
NEXT (PRESET UP)	21	32
PREVIOUS (PRESET DOWN)	21	33
VOLUME UP	21	16
VOLUME DOWN	21	17

[1] not in all versions

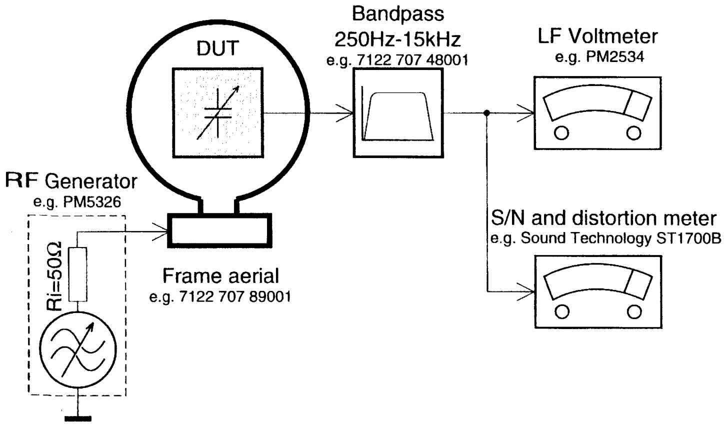
Measurement setup

Tuner FM


RF Generator
e.g. PM5326
Ri=50Ω
DUT
Bandpass
250Hz-15kHz
e.g. 7122 707 48001
LF Voltmeter
e.g. PM2534
S/N and distortion meter
e.g. Sound Technology ST1700B

Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

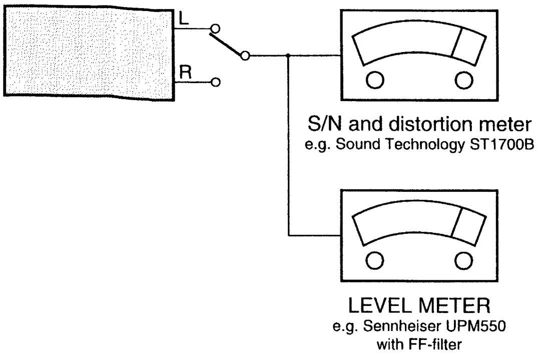
Tuner AM (MW,LW)


DUT
Bandpass
250Hz-15kHz
e.g. 7122 707 48001
LF Voltmeter
e.g. PM2534
RF Generator
e.g. PM5326
Ri=50Ω
Frame aerial
e.g. 7122 707 89001
S/N and distortion meter
e.g. Sound Technology ST1700B

To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

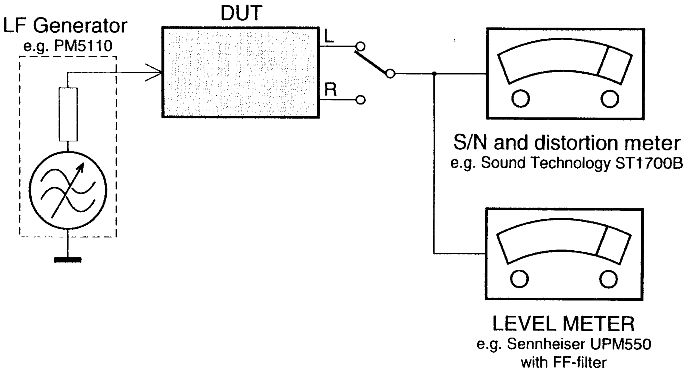
CD

Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)

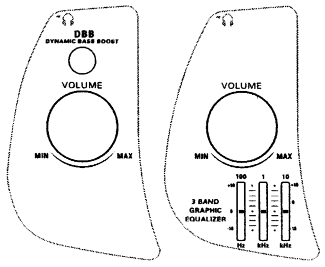

DUT
L
R
S/N and distortion meter
e.g. Sound Technology ST1700B
LEVEL METER
e.g. Sennheiser UPM550
with FF-filter

RECORDER

Use Universal Test Cassette **CrO₂** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071

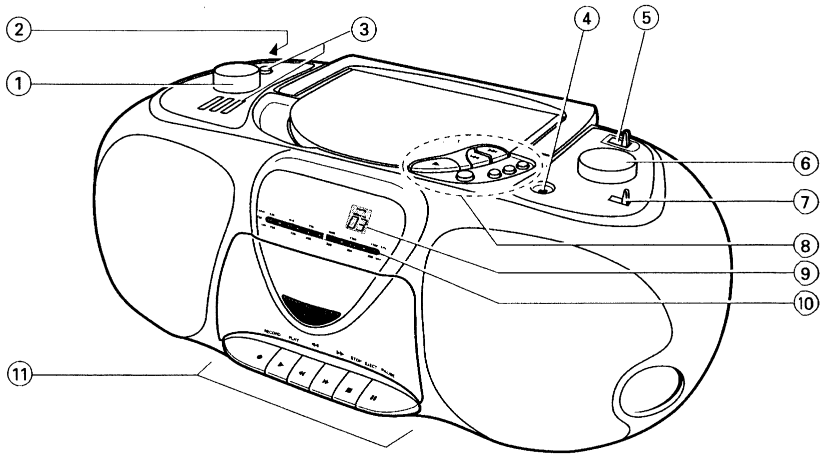

LF Generator
e.g. PM5110
DUT
L
R
S/N and distortion meter
e.g. Sound Technology ST1700B
LEVEL METER
e.g. Sennheiser UPM550
with FF-filter

CONNECTIONS & CONTROLS



AZ8050, AZ8051
AZ8150

AZ8052



① VOLUME...............to adjust the volume level

② 🎧 (at the back)...3.5mm headphone socket.
Note: Inserting the plug will disconnect the speakers.

③
DBB ....Dynamic Bass Boost:
to increase the bass level

or
3 BAND GRAPHIC EQUALIZER: to adjust the
sound to your taste

④ MIC ....3.5mm microphone socket
(see RECORDING)

⑤ POWER ON...........to select the sound source:
CD-TAPE/OFF-RADIO

RADIO:

⑥ TUNING ....to tune to radio stations
⑦ FM-MW-LW.........to select the wave band
⑩ Indicator for radio tuning

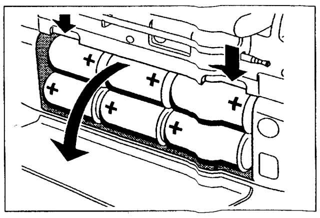
CD PLAYER:

⑧ OPEN·CLOSE ....to open/close the CD lid
PLAY·PAUSE ▶ to start and to interrupt CD play
SEARCH ⏮ ⏭ to skip and to search forwards and backwards
STOP ■.................to stop play and to erase a program
SHUFFLE ....to play in random order
REPEAT.................to repeat one track or to repeat the CD or program
PROG ....to program track numbers and to review the program
⑨ CD Display

CASSETTE RECORDER:

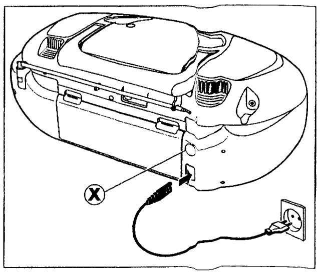
⑪ RECORD ● ....to start recording
PLAY ▶.................to start playback
◀◀.........................to rewind the tape
▶▶ ....to wind the tape
STOP·EJECT ■ .....to stop the tape and to open the cassette compartment
PAUSE ❚❚...............to interrupt recording or playback
DIRECTION ....to change the plazback direction (AZ8150 only)

Batteries, R20 UM1 or D cells



- Open the battery compartment and insert six batteries, type R20, UM-1 or D-cells (preferably alkaline).
- Remove the batteries if they are empty or the set is not to be used for a long time.

Mains



1 Check if the mains voltage as shown on the type plate (on the base of the set) corresponds to your local mains voltage. If it does not, consult your dealer or service organisation.

If the set is equipped with a VOLTAGE selector ⓧ, set this selector to the local mains voltage.

2 Connect the mains lead to the MAINS outlet and the wall socket. The mains supply is switched on.

- The battery supply is switched off when the set is connected to the mains. To change over to battery supply, pull out the plug from the unit's MAINS socket.
- To disconnect the set from the mains completely, withdraw the mains plug from the wall socket.

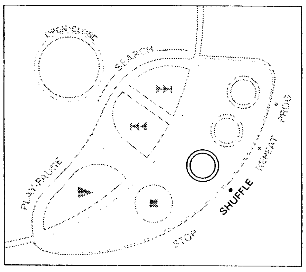
Brief excerpt of the INSTRUCTION FOR USE

CD PLAYER

SHUFFLE – playing in random order

1 Press SHUFFLE before or during CD play.
→ All the tracks will now be played in a random order.

2 To return to normal CD play, press SHUFFLE.

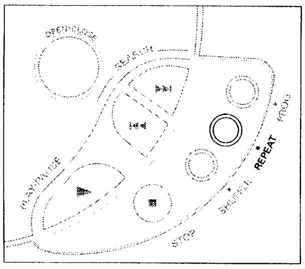

OPEN•CLOSE
SEARCH
⏭
⏮
PROG
REPEAT
SHUFFLE
PLAY•PAUSE
STOP

REPEAT – Repeating the entire CD or one track of the CD

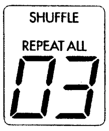
1 Before or during CD play, press repeated REPEAT to cause the display showing the different repeating modes.

→ **REPEAT**: the current track is played repeatedly.
→ **REPEAT ALL**: the entire CD or program is played repeatedly.

2 To return to normal CD play, press REPEAT until the display indication disappears.


OPEN•CLOSE
SEARCH
⏭
⏮
PROG
REPEAT
SHUFFLE
PLAY•PAUSE
STOP

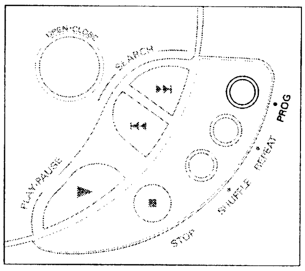
Note: You can activate the different playing modes at the same time, e.g. to ***repeatedly*** *play the entire CD or program* ***in random order*** *(REPEAT ALL/SHUFFLE)*


SHUFFLE
REPEAT ALL
03

Example
Display indication when the respective playing mode is activated.

Programming track numbers

You may select a number of tracks and store these in the memory in the desired sequence. You may store any track more than once. At most, 20 tracks can be stored in the memory.

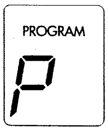

OPEN•CLOSE
SEARCH
⏭
⏮
PROG
REPEAT
SHUFFLE
PLAY•PAUSE
STOP

1 Select with SEARCH ⏮ or ⏭ the desired track.

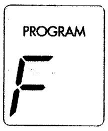
2 As soon as the desired track is displayed, press the PROG button to store the track in the memory.
→ On the display PROGRAM appears and P lights briefly up.
After that the stored track number is shown.

3 Select and store in this way all desired tracks.

- You can review your settings by pressing the PROG button for more than 2 seconds.
→ The display shows in sequence all stored track numbers.



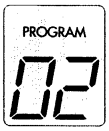
Display indication:
when you store a track.



Display indication
when you try to store
more than 20 tracks.

Playing the program

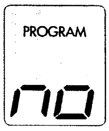
- If you have selected the tracks in the STOP position, press PLAY·PAUSE ►.
- If you have selected the tracks during CD play, press first STOP ■ and then press PLAY·PAUSE ►.



Example
Display indication when you play the program.

Erasing the program from the STOP position

- From the stop position, press STOP ■.
  → PROGRAM disappears on the display and your program is erased.



Display indication when you erase a program.

Note: The program will also be erased
- if you interrupt the power supply;
- if you open the lid or
- if you move the POWER ON selector.

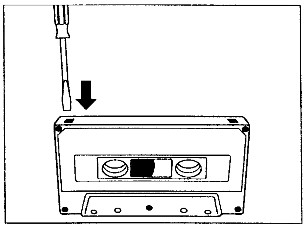
CASSETTE RECORDER

General information on recording

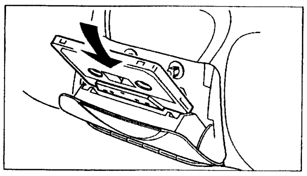
- Recording is permissible insofar as copyright or other rights of third parties are not infringed.
- For recording on this set you should use a cassette of the type "NORMAL" (IEC type **I**). This deck is not suited for recording on cassettes of the type "CHROME" (IEC **II**) or "METAL" (IEC **IV**).
- The recording level is set automatically. The controls VOLUME and DBB or 3 BAND GRAPHIC EQUALIZER do not affect the recording.
- At the very beginning and end of the tape, no recording will take place during the 7 seconds when the leader tape passes the recorder heads.

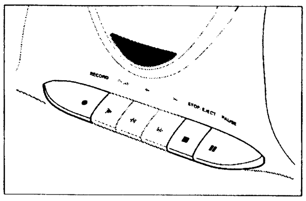
Protecting tapes from accidental erasure

- Keep the cassette side to be safeguarded in front of you and break out the left tab. Now, recording on this side is no longer possible.
- To render this safeguard ineffective, cover the aperture with a piece of adhesive tape.



CD synchro start – recording from the CD player





1 Set the POWER ON selector to CD.

2 Insert a CD and if desired, program track numbers.

3 Press STOP·EJECT ■ to open the cassette compartment.

4 Insert a blank cassette with the open side downwards.

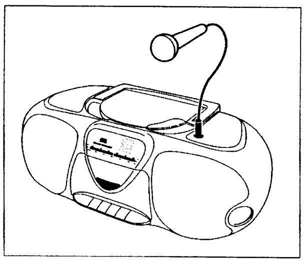
5 Press RECORD ● to start recording.
→ Playing of the CD or program starts automatically.
It is not necessary to start the CD player separately.

6 For brief interruptions, press PAUSE **II**.
To resume recording, press the key once more.

7 To stop recording, press STOP·EJECT ■.

Note: The recording can be started from different positions:
- if the CD player is in the PAUSE position, recording will start from this very position (use SEARCH |◀◀ or ▶▶|);
- if the CD player is in the STOP position, recording will start from the beginning of the CD or program.

Recording from the radio or with the microphone



1 Set the POWER ON selector to TAPE or RADIO.
2 Prepare the sound source for recording:

RADIO: Tune to a radio station.

TAPE (microphone): Connect a microphone with a 3.5mm plug to the MIC socket. Set the VOLUME control to zero (monitoring during microphone recording is not possible).

3 Press STOP·EJECT ■ to open the cassette compartment.

4 Insert a blank cassette with the open side downwards.

5 Press RECORD ● to start recording.

6 For brief interruptions, press PAUSE **II**.
To resume recording, press the key once more.

7 To stop recording, press STOP·EJECT ■.

Note: When recording from the radio or a CD, you can connect a microphone and mix the sounds. Otherwise, be sure there is no microphone connected that could disturb your recording.

WARNINGS & SAFETY

ESD

(GB) WARNING

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools at this potential.

(F) ATTENTION

Tous les IC et beaucoup d´autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévite pourrait être considérablement écourtée par le fait qu´aucune précaution nést prise à leur manipulation.
Lors de réparations, s´assurer de bien être relié au même potentiel que la masse de l´appareil et enfileer le bracelet serti d´une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l´on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Sorgen Sie dafür, daß sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(NL) WAARSCHUWING

Alle IC´s en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delápparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SAFETY

(GB)
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.
Safety components are marked by the symbol ⚠

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.
Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

(I)
Le norme di sicurezza estigono che l´apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.
Componenty di sicurezza sono marcati con ⚠

(F)
Les normes de sécurité exigent que l`appareil soit remis à l`état d`origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.
Les composants de sécurité sont marqués ⚠

(NL)
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.
De Veiligheidsonderdelen zijn aangeduid met het symbool ⚠

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(DK) Advarsel !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(FIN) Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

(F)
"Pour votre sécurite, ces documents doivent être utilisés par des spécialistes agrées, seuls habilités à réparer votre appareil en panne".

DISMANTLING INSTRUCTIONS

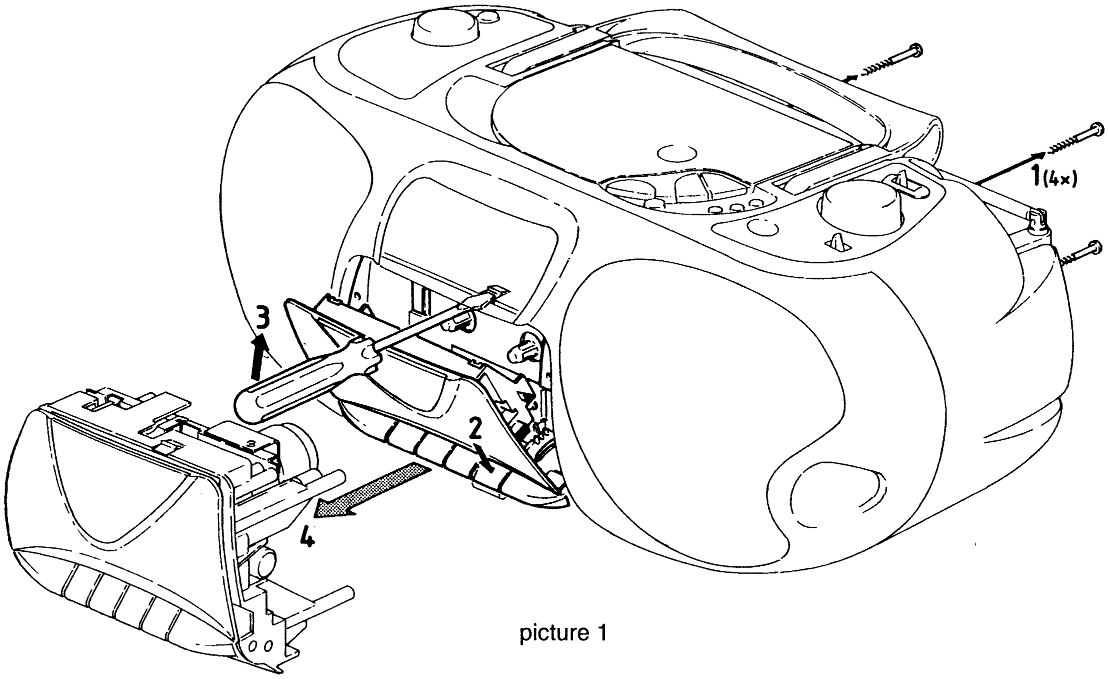
Separation of Front cabinet from Rear cabinet

- Use Torx T10 screwdriver with shaftlength 150mm e.g. 4822 395 50423
- Loosen 8 screws 3x30mm on rear side as shown in the exploded view drawing (4 pcs. inside battery compartment)
- Open CD-door and loosen screw 3x12mm inside CD-compartment.
- Move Front cabinet apart (2-3cm) until actuating lever for REC/Pb-switch overlaps Top cabinet.
- Plug head connection cable off.
- Lift Rear cabinet over the lever and separate cabinet parts as you like.

Separation of Top cabinet from Rear cabinet

- Loosen 4 screws 3x12mm + antenna screw 3x16mm on rear side and 2 screws 3x12mm on front side.
- Loosen 2 screws 3x30mm beneath carrying handle.
- Pull Top cabinet off.

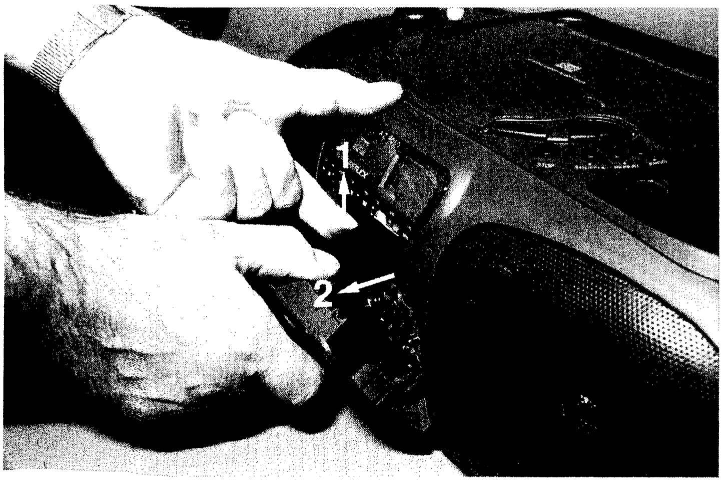
Dismantling of the Tape transport only



picture 1

- Loosen 4 screws 3x30mm inside the battery compartment.
- Open cassette door.
- Release snap hook as shown in picture 1 and pull Recorder Unit out.

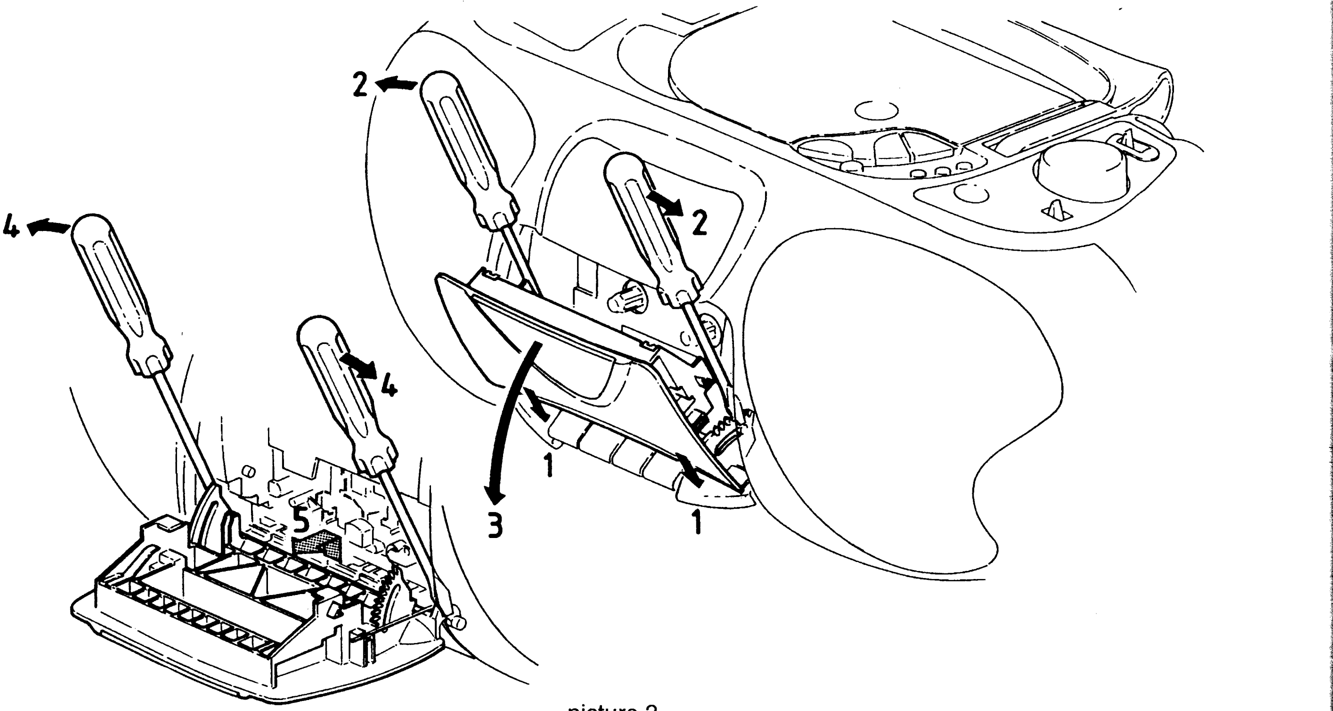
remark: to release snap hook it will also do when front cabinet is pressed upwards as shown in picture 2.



picture 2

Dismantling of the Cassette Door

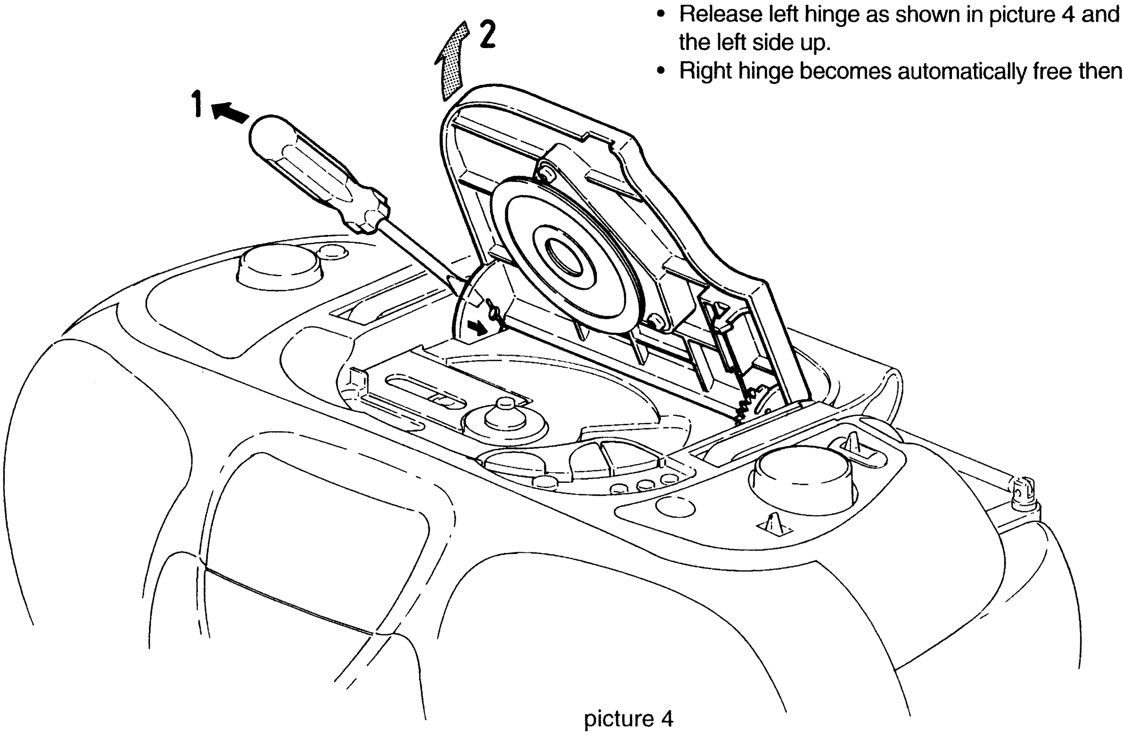
- Open cassette door and depress *REC-* and *PAUSE*-key first.
- Release catches by pressing them inwards with a screwdriver and open door as shown in picture 3.
- Release hinges by pressing them inwards with a screwdriver. Then pull door a bit upwards to get it free from *REC-* respectively *PAUSE*-key and pull door out.



picture 3

Dismantling of the CD Door

- Release left hinge as shown in picture 4 and pull door at the left side up.
- Right hinge becomes automatically free then.

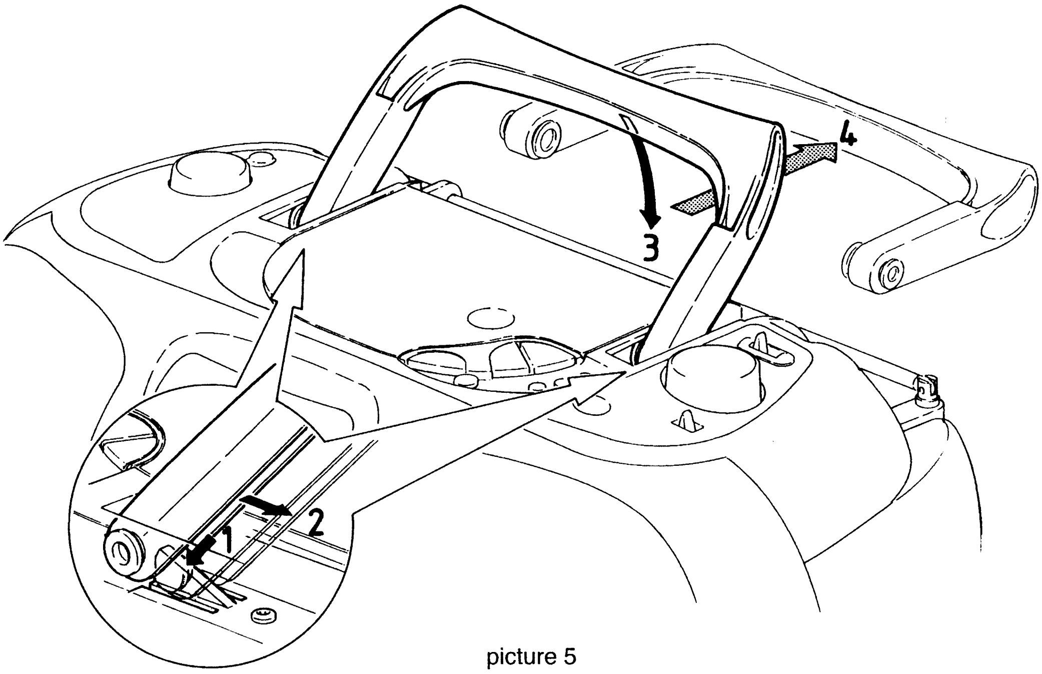


picture 4

Dismantling of the Carrying Handle

- Turn handle upright first.
- Press catch ribs a little bit downwards and pull handle backwards until catch ribs are hold in a slightly lower position.
- Now turn handle completely down ⇒ catch ribs will now automatically be bent downwards and release the handle.
- Pull handle backwards until it is free.

To mount the handle simply put it horizontally into the cabinet until it snaps in



picture 5

SERVICE HINTS

SERVICE TOOLS

TORX T10 screwdriver with shaftlength 150mm 4822 395 50423
TORX screwdriver set SBC 163 ....4822 295 50145

Audio signal disc SBC 429...4822 397 30184
Test disc 5 (disc without errors) +
Test disc 5A (disc with dropout errors, black spots and fingerprints)
SBC 426/426A 4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30dB level without "pause") ...4822 397 30155

Universal test cassette Fe SBC 420 ....4822 397 30071

CIRCUIT DESCRIPTION

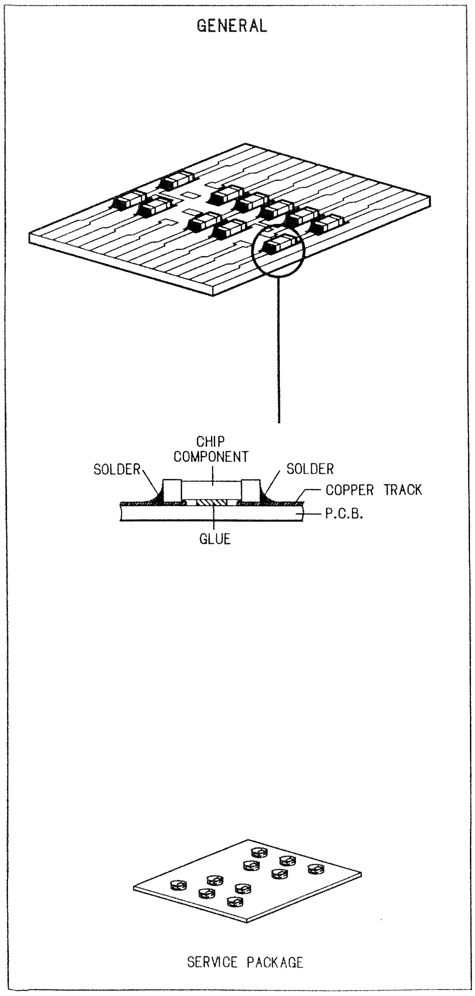
For circuit description of the CD part we refer to

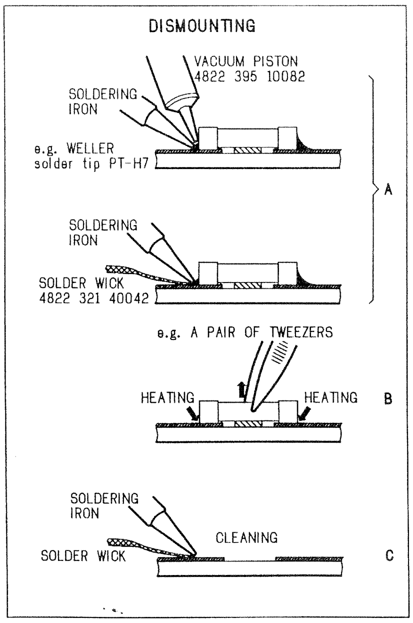
CIRCUIT DESCRIPTION ***CD93 PART I*** (4822 725 24041)
chapter 2.2 : TDA1301(DSIC2: Digital Servo IC)

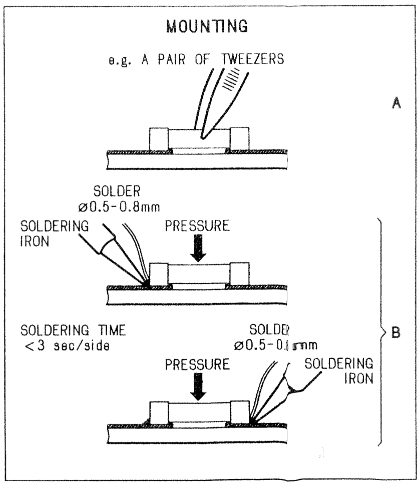
CIRCUIT DESCRIPTION ***New key components of CD 94 program*** (4822 725 25233)
chapter 3 : CD6 decoder SAA7345

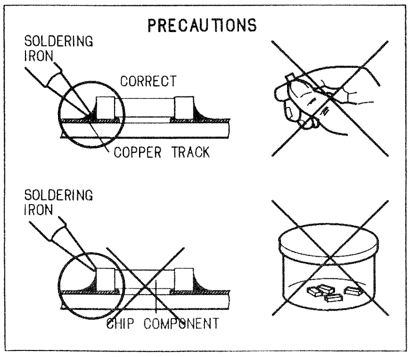
For a brief description see chapter 3 - 9 of this service manual.

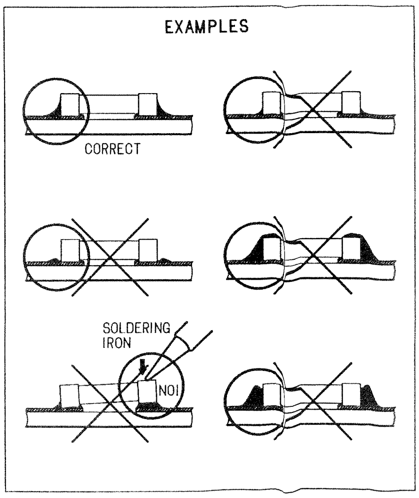
HANDLING CHIP COMPONENTS


GENERAL
CHIP COMPONENT
SOLDER
SOLDER
COPPER TRACK
P.C.B.
GLUE
SERVICE PACKAGE


DISMOUNTING
VACUUM PISTON 4822 395 10082
SOLDERING IRON
e.g. WELLER solder tip PT-H7
A
SOLDERING IRON
SOLDER WICK 4822 321 40042
e.g. A PAIR OF TWEEZERS
HEATING
HEATING
B
SOLDERING IRON
CLEANING
SOLDER WICK
C

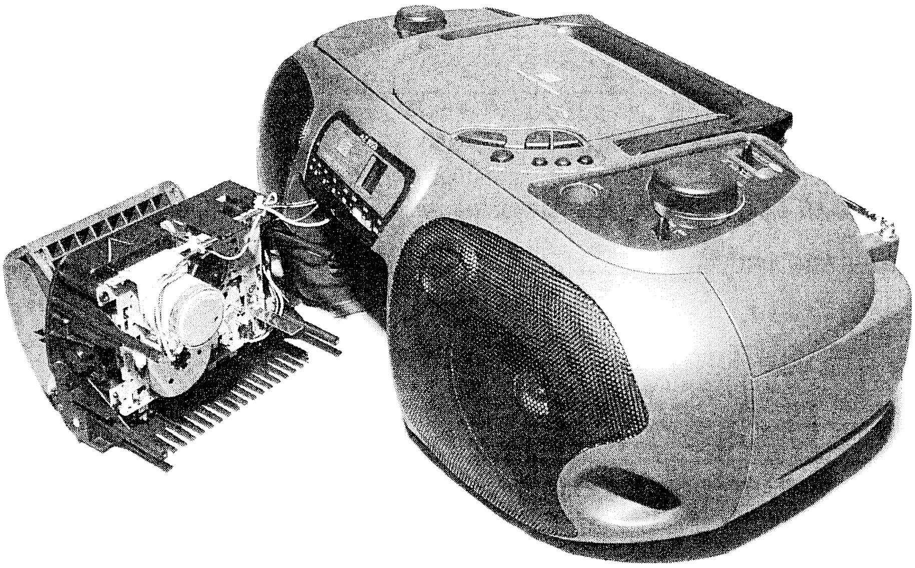

MOUNTING
e.g. A PAIR OF TWEEZERS
A
SOLDER ø0.5-0.8mm
SOLDERING IRON
PRESSURE
SOLDERING TIME <3 sec/side
SOLDER ø0.5-0.8mm
PRESSURE
SOLDERING IRON
B


PRECAUTIONS
SOLDERING IRON
CORRECT
COPPER TRACK
SOLDERING IRON
CHIP COMPONENT


EXAMPLES
CORRECT
SOLDERING IRON
NO!

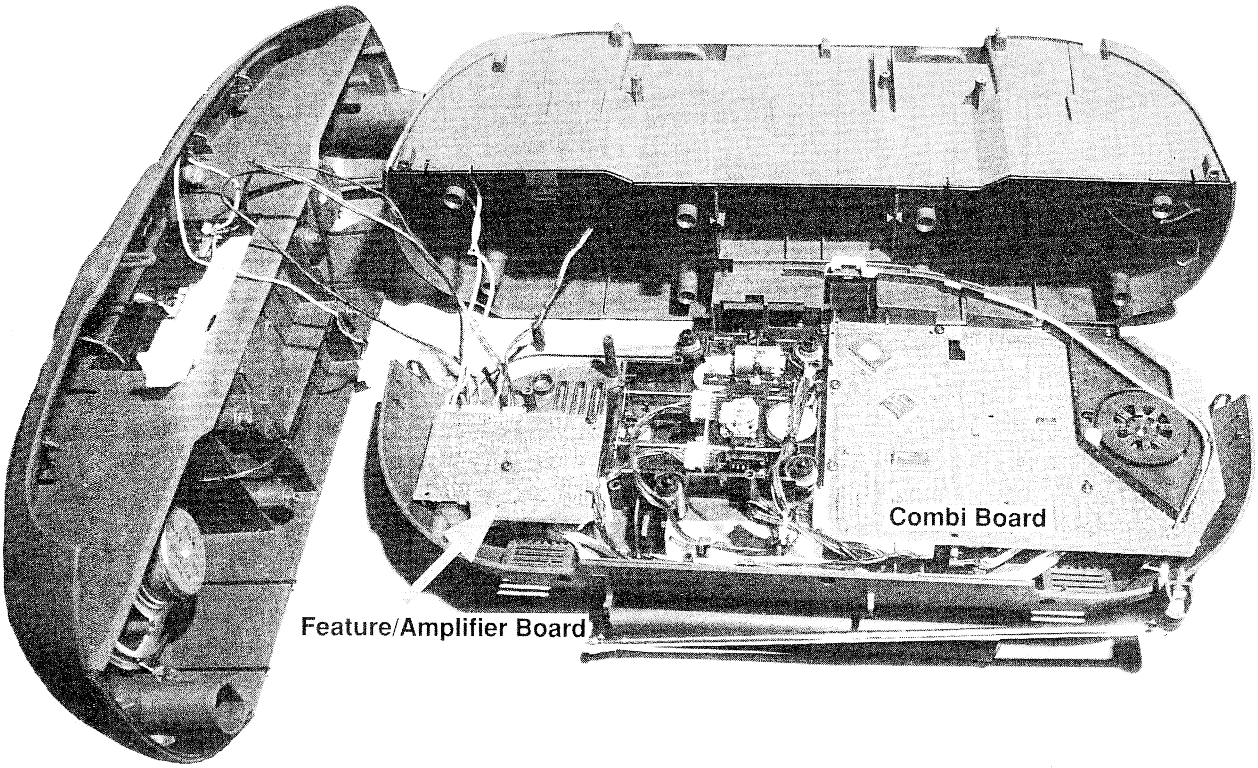
REPAIR POSITIONS

TAPE TRANSPORT



picture 6

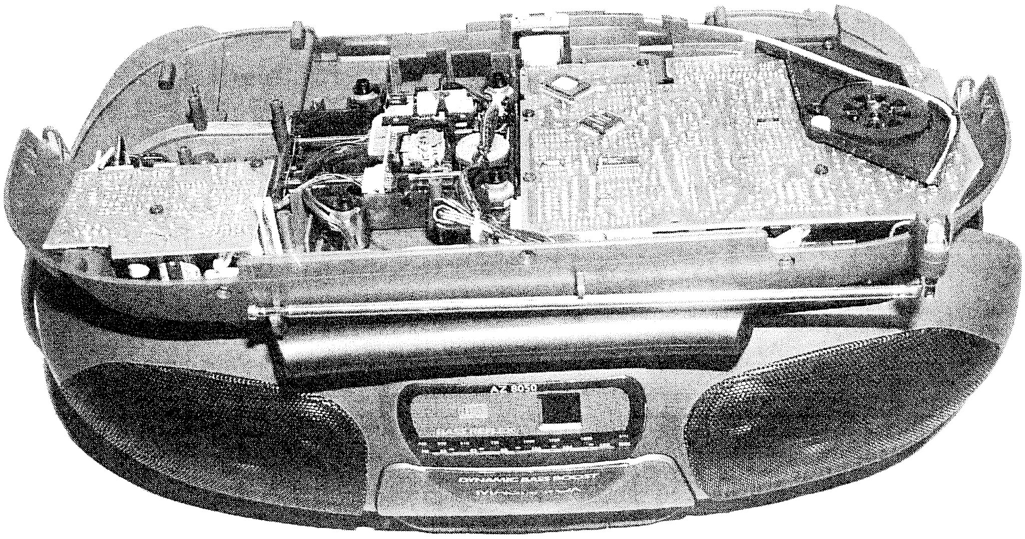
Repairs on
Feature/Ampl.- board, Combi-board and CDdrive
(Head connection cable plugged off)


Combi Board
Feature/Amplifier Board

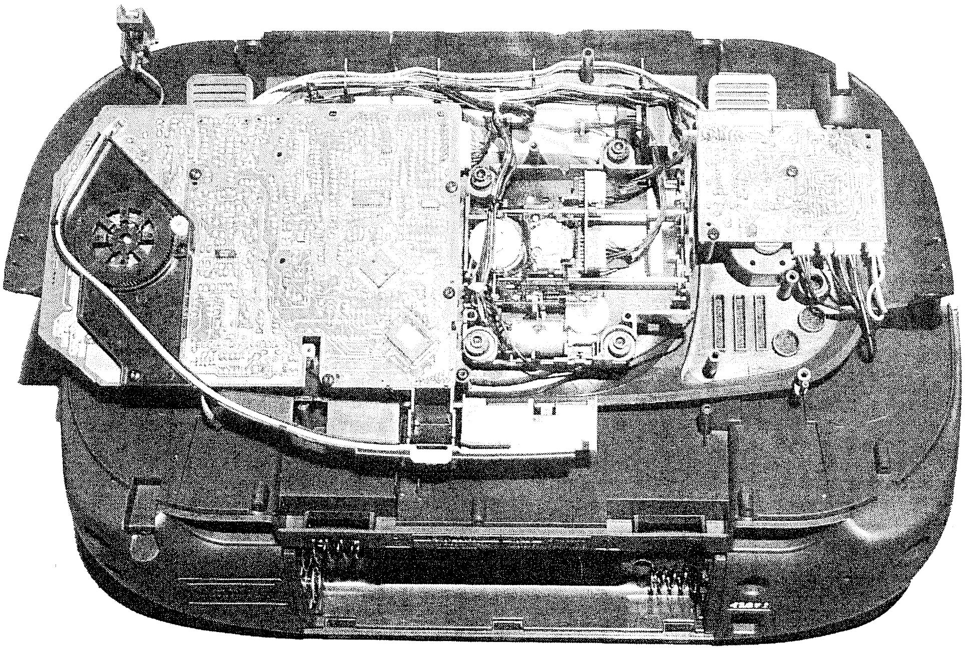
picture 7

Repairs on Feature/Ampl.- board, Combi-board and CDdrive

(Head connection cable connected)



picture 8



picture 9

CD - SERVICE TESTPROGRAM

- *STOP* button pressed in any step returns to begin of Service Testprogram.
- To leave Service Testprogram switch CD mode off.
- Door switch is ignored → CD door can be opened.

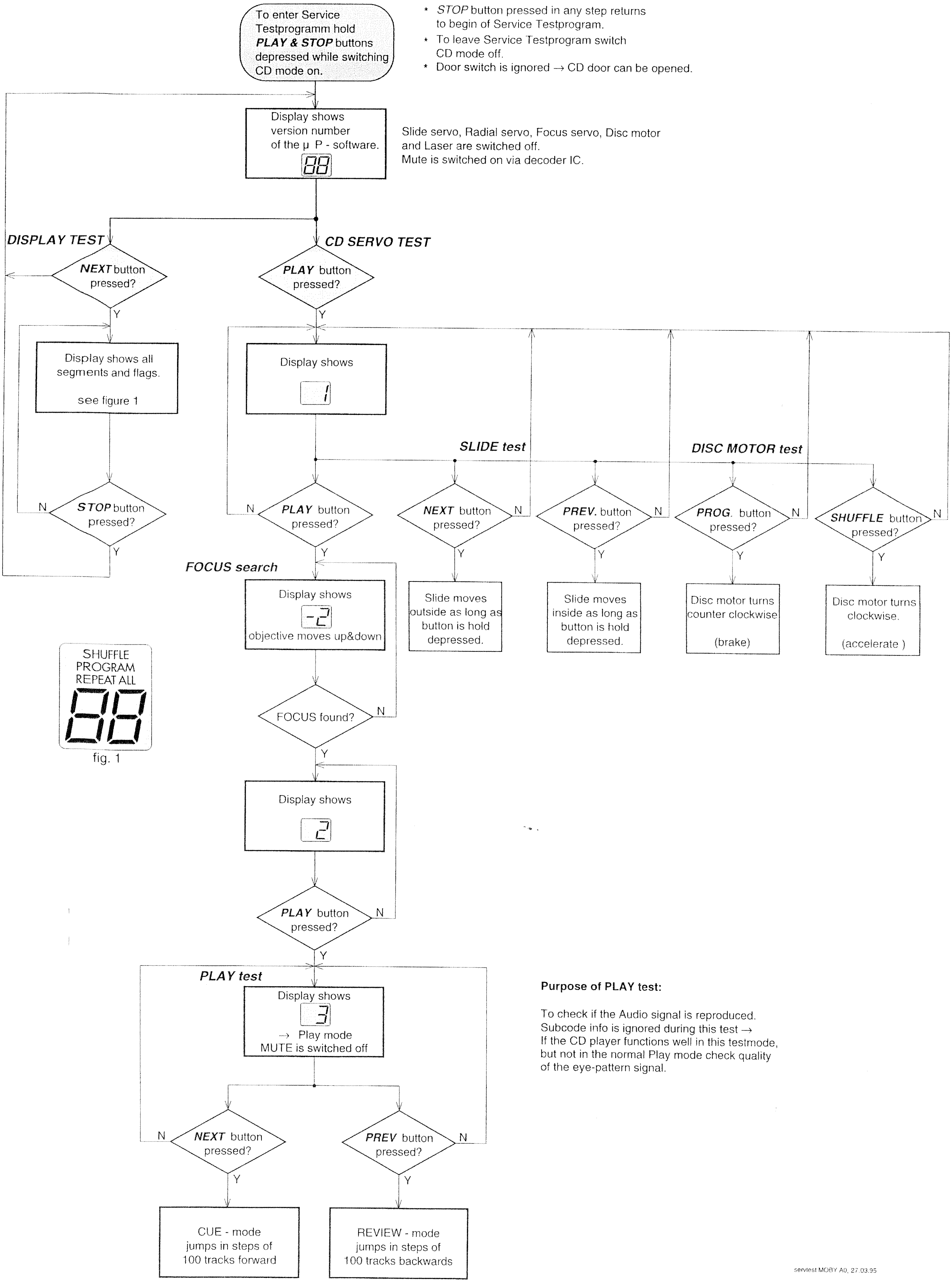

To enter Service Testprogramm hold **PLAY & STOP** buttons depressed while switching CD mode on.
Display shows version number of the µ P - software.
88
DISPLAY TEST
CD SERVO TEST
NEXT button pressed?
Y
Display shows all segments and flags.
see figure 1
N
STOP button pressed?
Y
PLAY button pressed?
Y
Display shows
1
SLIDE test
DISC MOTOR test
N
PLAY button pressed?
NEXT button pressed?
N
PREV. button pressed?
N
PROG. button pressed?
N
SHUFFLE button pressed?
N
Y
Slide moves outside as long as button is hold depressed.
Y
Slide moves inside as long as button is hold depressed.
Y
Disc motor turns counter clockwise (brake)
Y
Disc motor turns clockwise. (accelerate)
Y
FOCUS search
Display shows
-2
objective moves up&down
FOCUS found?
N
Y
Display shows
2
PLAY button pressed?
N
Y
PLAY test
Display shows
3
→ Play mode
MUTE is switched off
N
NEXT button pressed?
Y
PREV button pressed?
N
Y
CUE - mode jumps in steps of 100 tracks forward
REVIEW - mode jumps in steps of 100 tracks backwards
SHUFFLE
PROGRAM
REPEAT ALL
88

fig. 1

Slide servo, Radial servo, Focus servo, Disc motor and Laser are switched off.
Mute is switched on via decoder IC.

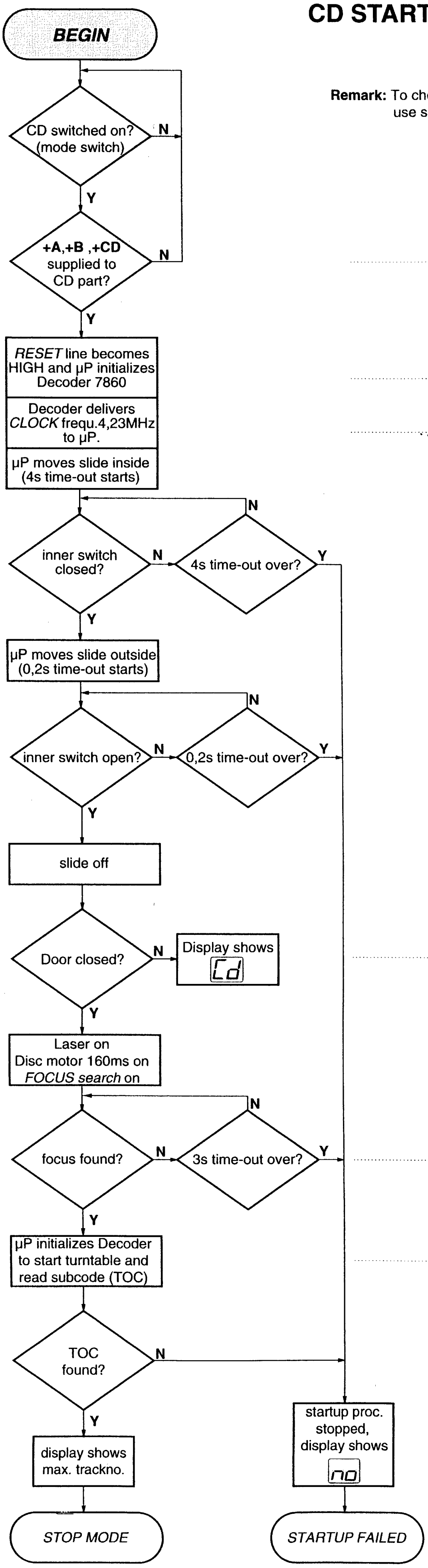
Purpose of PLAY test:

To check if the Audio signal is reproduced.
Subcode info is ignored during this test →
If the CD player functions well in this testmode, but not in the normal Play mode check quality of the eye-pattern signal.

servtest MOBY A0, 27.03.95

CD STARTUP - PROCEDURE

Remark: To check focus servo, slide servo, track servo and turntable use service test program


BEGIN
CD switched on? (mode switch)
N
Y
+A,+B ,+CD supplied to CD part?
N
Y
RESET line becomes HIGH and µP initializes Decoder 7860
Decoder delivers CLOCK frequ.4,23MHz to µP.
µP moves slide inside (4s time-out starts)
N
inner switch closed?
N
4s time-out over?
Y
Y
µP moves slide outside (0,2s time-out starts)
N
inner switch open?
N
0,2s time-out over?
Y
Y
slide off
Door closed?
N
Display shows Cd
Y
Laser on
Disc motor 160ms on
FOCUS search on
N
focus found?
N
3s time-out over?
Y
Y
µP initializes Decoder to start turntable and read subcode (TOC)
TOC found?
N
Y
display shows max. trackno.
startup proc. stopped, display shows no
STOP MODE
STARTUP FAILED

- Battery empty?
- check **+A, +B, +CD** and **+µP**

check: - time constant of reset circuit
- Pin 17,18 of µP 7800 HIGH ?
- Pin 28 of decoder 7860 HIGH?

check: - Pin 10 of µP 7800 - if 4,23 MHz o.k.
- if 2,11 MHz check data-lines to Decoder **IC**

check: - door switch

check: - Laser light on ? - Check pin 2 of 7850 and *LASER CONTROL* circuit
- Focus Servo

check: - Motor control pin 22 of Decoder 7860 and Disc Motor driver 7805
- HF Signal

Moby Startup A0. 060495

Abbreviations and Pin-descriptions of CD ICs

DSIC2 *D*igital *S*ervo *IC* TDA1301T/N1

Pin	*Name*	*Direction*	*Description*
1	RESET	µP -> DSIC2	Reset input (Low level is active)
2	Laser On/Off	DSIC -> Laser control	Switches Laser on/off (High level is active)
3	Gnd	Gnd	Ground (Analogue part)
4	VRH		High reference input for A/D converter
5	D1	Diode array -> DSIC2	Unipolar current input (Central diode signal input)
6	D2	Diode array -> DSIC2	Unipolar current input (Central diode signal input)
7	D3	Diode array -> DSIC2	Unipolar current input (Central diode signal input)
8	VRL		Low reference input for A/D converter
9	D4	Diode array -> DSIC2	Unipolar current input (Central diode signal input)
10	R1	Diode array -> DSIC2	Unipolar current input (Satellite diode signal input)
11	R2	Diode array -> DSIC2	Unipolar current input (Satellite diode signal input)
12	VDD(A)		Positive supply for Analog part
13	XTLR		Input for adjustment of oscillator gain
14	TS1	Gnd	Test input 1 (connected to ground)
15	TS2	Gnd	Test input 2 (connected to ground)
16	OTD	DSIC2 -> Signal Processor	Off Track Detection output (Low level is active)
17	CLO	not connected	Buffered Clock Output
18	XTLO		Oscillator output or ext. clock input pin for 8.4672, 12.7008 or 16.9344MHz
19	XTLI		Oscillator input or ext. clock input pin for 8.4672, 12.7008 or 16.9344MHz
20	VDD(D)		Positive supply for Digital part
21	Gnd		Ground (Digital part)
22	Track	DSIC2 -> Servo Driver	Radial control output
23	Focus	DSIC2 -> Servo Driver	Focus control output
24	Slide	DSIC2 -> Motor Driver	Slide motor control output
25	SILD	µP -> DSIC2	Serial Interface Load
26	SICL	µP -> DSIC2	Serial Interface Clock
27	SIDA	µP <-> DSIC2	Serial Interface Data
28	VDD(D)		Positive supply for Digital part

SIGNAL PROCESSOR SAA7345GP/M5

Pin	*Name*	*Direction*	*Description*
1	CL11	not connected	11.2896MHz clock output (3-state)
2	DOBM	signal processor -> Digital out (n.c.)	digital bi-phase mark output (3-state)
3	V1	not connected	versatile input pin of signal processor
4	V2	not connected	versatile input pin of signal processor
5	Test2	GND	test input of signal processor
6	Test1	GND	test input of signal processor
7	ISLICE	signal processor -> signal processor	current feedback from internal data slicer
8	HFIN	HF Pre-amp -> signal processor	comparator signal input
9	HFREF	HF Pre-amp -> signal processor	comparator signal input
10	IREF	-> signal processor	reference current pin (nom. VDD/2)
11	VDDA		+supply (analog) of signal processor
12	VSSA		-supply (analog) of signal processor
13	CRIN	X-tal -> signal processor	crystal/resonator input of signal processor
14	CROUT	signal processor -> X-Tal	crystal/resonator output of signal processor
15	VDD1		+supply for I/O-buffers of signal processor
16	VSS1		-supply for I/O-buffers of signal processor
17	CL16	signal processor -> DSIC2	16.9344MHz clock output of signal processor
18	MISC	not connected	general purpose DAC output (3-state)
19	DATA	signal processor -> DAC	serial data output of signal processor (3-state)
20	WCLK	signal processor -> DAC	word clock output of signal processor (3-state)
21	SCLK	signal processor -> DAC	serial bit clock output of signal processor (3-state)
22	MOTOR1	signal processor -> Disc motor driver	motor output1 of signal processor; versatile (3-state)
23	MOTOR2	not connected	motor output 2 of signal processor; versatile (3-state)
24	V5	not connected	versatile output pin of signal processor
25	V4	not connected	versatile output pin of signal processor
26	V3	not connected	versatile output pin of signal processor (open drain)
27	KILL	not connected	Mute output; programmable (open drain)
28	PORE	µP -> signal processor	power-on reset enable input (active low)
29	CLA	signal processor -> µP	4.2336MHz microprocessor clock output
30	DA	µP <-> signal processor	interface data I/O-line
31	CL	µP -> signal processor	interface clock input line
32	RAB	µP -> signal processor	interface R/W and acknowledge input
33	CFLG	not connected	correction flag output (open drain)
34-42	not used		
43	VSS2		Positive supply for internal logic of signal processor
44	VDD2	GND	Negative supply for internal logic of signal processor

SERVICE TESTPROGRAM

(COMBI Board 'A3' analog)

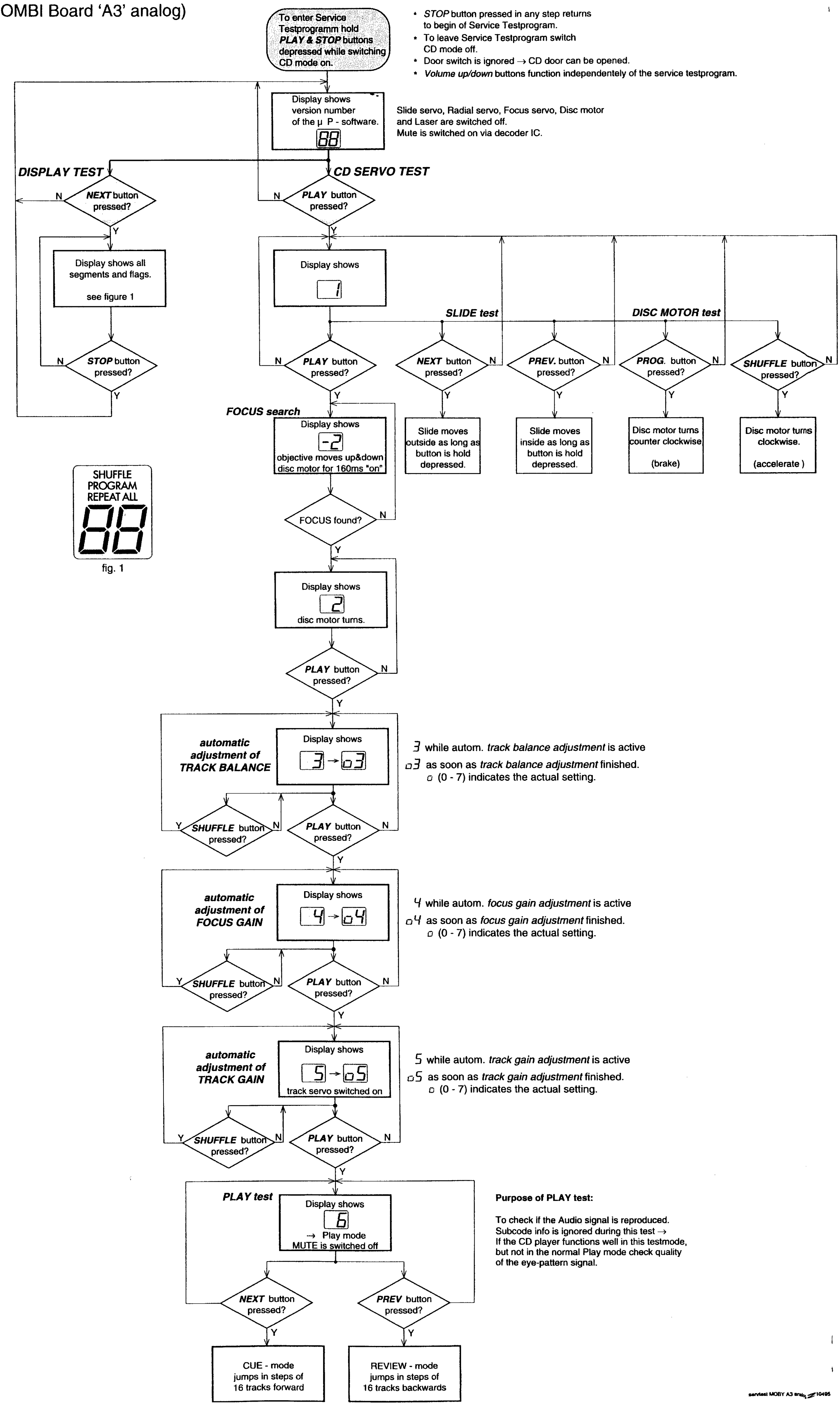

To enter Service Testprogramm hold PLAY & STOP buttons depressed while switching CD mode on.
Display shows version number of the µ P - software.
88
DISPLAY TEST
CD SERVO TEST
N
NEXT button pressed?
Y
Display shows all segments and flags.
see figure 1
STOP button pressed?
PLAY button pressed?
Display shows
1
SLIDE test
DISC MOTOR test
PLAY button pressed?
NEXT button pressed?
PREV. button pressed?
PROG. button pressed?
SHUFFLE button pressed?
Slide moves outside as long as button is hold depressed.
Slide moves inside as long as button is hold depressed.
Disc motor turns counter clockwise
(brake)
Disc motor turns clockwise.
(accelerate)
FOCUS search
Display shows
-2
objective moves up&down disc motor for 160ms "on"
FOCUS found?
Display shows
2
disc motor turns.
PLAY button pressed?
SHUFFLE
PROGRAM
REPEAT ALL
88
automatic adjustment of TRACK BALANCE
Display shows
3 → o3
SHUFFLE button pressed?
PLAY button pressed?
automatic adjustment of FOCUS GAIN
Display shows
4 → o4
SHUFFLE button pressed?
PLAY button pressed?
automatic adjustment of TRACK GAIN
Display shows
5 → o5
track servo switched on
SHUFFLE button pressed?
PLAY button pressed?
PLAY test
Display shows
6
→ Play mode
MUTE is switched off
NEXT button pressed?
PREV button pressed?
CUE - mode jumps in steps of 16 tracks forward
REVIEW - mode jumps in steps of 16 tracks backwards

fig. 1

- *STOP* button pressed in any step returns to begin of Service Testprogram.
- To leave Service Testprogram switch CD mode off.
- Door switch is ignored → CD door can be opened.
- *Volume up/down* buttons function independentely of the service testprogram.

Slide servo, Radial servo, Focus servo, Disc motor and Laser are switched off.
Mute is switched on via decoder IC.

3 while autom. *track balance adjustment* is active
o3 as soon as *track balance adjustment* finished.
o (0 - 7) indicates the actual setting.

4 while autom. *focus gain adjustment* is active
o4 as soon as *focus gain adjustment* finished.
o (0 - 7) indicates the actual setting.

5 while autom. *track gain adjustment* is active
o5 as soon as *track gain adjustment* finished.
o (0 - 7) indicates the actual setting.

Purpose of PLAY test:

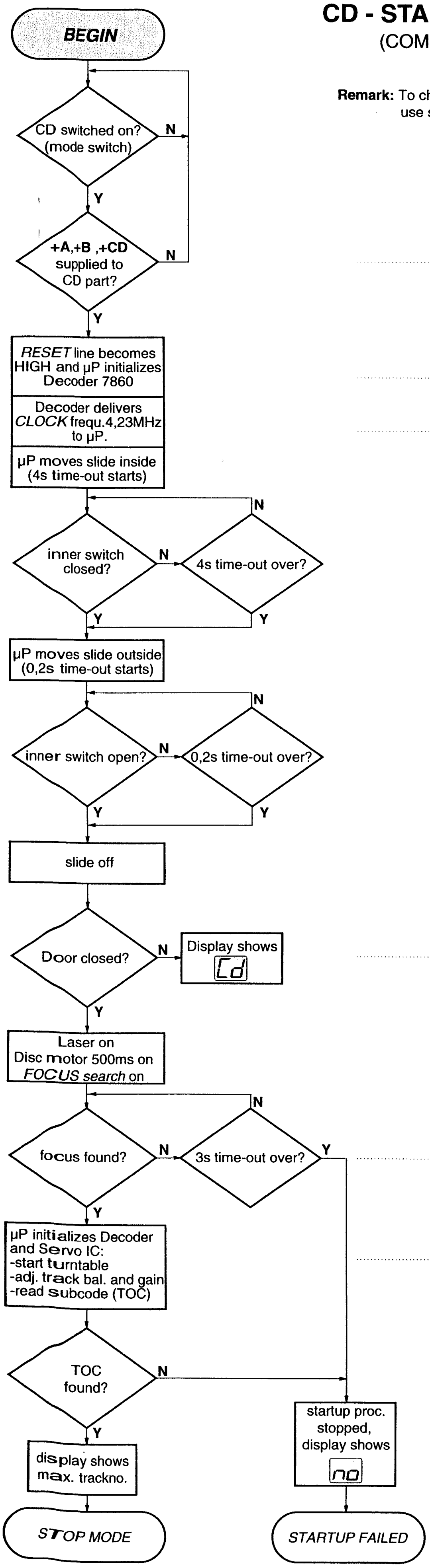
To check if the Audio signal is reproduced.
Subcode info is ignored during this test →
If the CD player functions well in this testmode, but not in the normal Play mode check quality of the eye-pattern signal.

servtest MOBY A3 analog 10495

CD - STARTUP PROCEDURE

(COMBI Board 'A3' analog)

Remark: To check focus servo, slide servo, track servo and turntable use service test program


BEGIN
CD switched on? (mode switch)
N
Y
+A,+B ,+CD supplied to CD part?
N
Y
RESET line becomes HIGH and µP initializes Decoder 7860
Decoder delivers CLOCK frequ.4,23MHz to µP.
µP moves slide inside (4s time-out starts)
N
inner switch closed?
N
4s time-out over?
Y
Y
µP moves slide outside (0,2s time-out starts)
N
inner switch open?
N
0,2s time-out over?
Y
Y
slide off
Door closed?
N
Display shows Cd
Y
Laser on
Disc motor 500ms on
FOCUS search on
N
focus found?
N
3s time-out over?
Y
Y
µP initializes Decoder and Servo IC:
-start turntable
-adj. track bal. and gain
-read subcode (TOC)
TOC found?
N
Y
display shows max. trackno.
startup proc. stopped, display shows no
STOP MODE
STARTUP FAILED

- Battery empty?
- check **+A, +B, +CD** and **+µP**

check:
- time constant of reset circuit
- Pin 17,18 of µP 7800 HIGH ?
- Pin 28 of decoder 7860 HIGH?

check:
- Pin 10 of µP 7800 - if 4,23 MHz o.k.
  - if 2,11 MHz check data-lines to Decoder IC

check:
- door switch

check:
- Laser light on ? - Check pin 2 of 7850 and *LASER CONTROL* circuit
- Focus Servo

check:
- Motor control pin 22 of Decoder 7860 and Disc Motor driver 7805
- HF Signal

Moby CD Startup A3 analog,100595

Abbreviations and Pin-descriptions of CD ICs

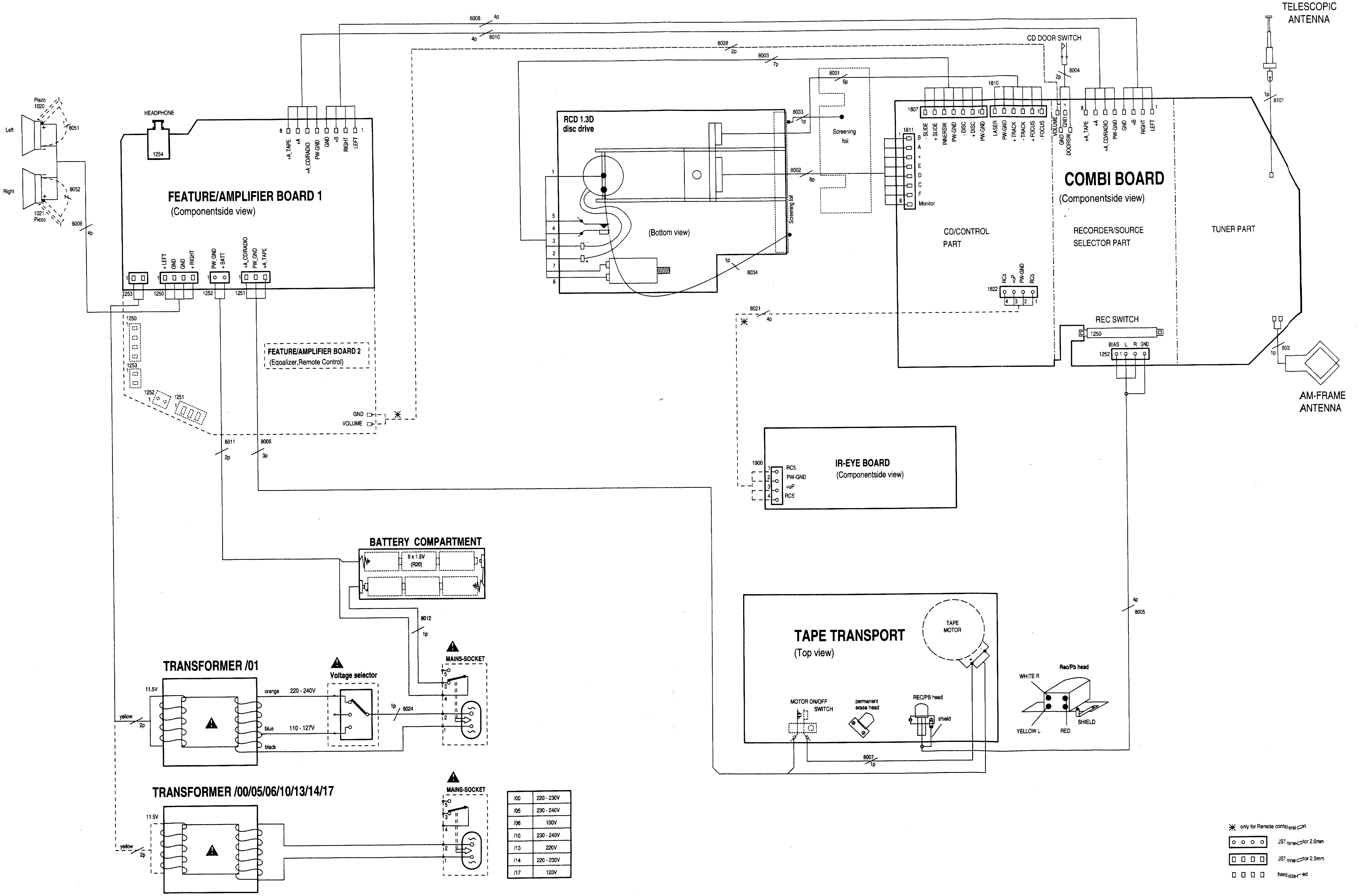
SERVO PROCESSOR M62475FP

Pin	*Name*	*Direction*	*Description*
1-3	A, B, C	Diode array -> Servo processor	Current input (central photo diode signal input)
4-5	E, F	Diode array -> Servo processor	Current input (satellite photo diode signal input)
6	SGT	Servo processor -> Track servo	Signal generator output to track servo, sends 1700Hz for adjustment procedure
7	TE -	-	Inverting input of trackerror amplifier
8	TEGain	-	Gain control pin of track error amplifier
9	TG1	-	Track Gain 1 - switch: controls the gain of the track servo amplifier
10	TE out	-	Track Error amplifier output
11	TC/Shock	-	Track Cross/Shock detector input
12	TS +	-	Non inverting input of track servo amplifier
13	TG2	not connected	Track Gain 2 - switch: controls the gain of the track servo amplifier
14	TS -	-	Inverting input of track servo amplifier
15	TS out	Servo processor -> Servo driver	Output of track servo amplifier
16	SS +	-	Non inverting input of slide servo amplifier
17	SS -	-	Inverting input of slide servo amplifier
18	Slide out	Servo processor -> Motor driver	Output of slide servo amplifier
19	DETFIL	-	Pin for connection of DETection FILter capacitor of *ADJUST LOGIC*
20	BIAS	Servo processor -> external electronic	Reference Voltage output Vcc/2 of internal BIAS-generator
21	GND	-	Ground connection pin (negative supply)
22	MLA/DIS	µP -> Servo processor	Serial interface Microprocessor LAtch control / DIScharge control for adjustment
23	JP1/SG	µP -> Servo processor	Serial interface Jump control line / Signal Generator input line for adjustment
24	MCK	µP -> Servo processor	Serial interface Clock input line
25	MSD	µP -> Servo processor	Serial interface Data input line
26	Dout	Servo processor -> µP	Serial interface Data output line
27	CLPF	-	Pin for connection of Low Pass Filter capacitor for *ADJUST LOGIC*
28	IREF	-	Reference current input
29	Vcc	-	Positive supply connection pin (4V - 5.5V)
30	FSout	Servo processor -> Servo driver	Output of focus servo amplifier
31	FS -	-	Inverting input of focus servo amplifier
32	FEGain	-	Gain control pin of focus error amplifier
33	FE -	-	Inverting input of focus error amplifier
34	SGF	Servo processor -> Focus servo	Signal generator output to focus servo, sends 1300Hz for adjust. procedure
35	CFSR	-	Charge capacitor for Focus Search triangle-generator
36	APC +	-	Non inverting input of Automatic laser Power Control amplifier
37	APC -	-	Inverting input of Automatic laser Power Control amplifier
38	APC out	Servo processor -> Laser driver	Output of Automatic laser Power Control amplifier
39	MRC	-	Connection pin for capacitor of Mirror detector
40	HF	Servo processor -> Decoder	Output of HF amplifier
41	HFI	-	Inverting input of HF amplifier
42	ABC	-	Sum output of amplified A, B and C input (central photo diode signal input) to external ac-coupling capacitor

SIGNAL PROCESSOR SAA7345GP/M5

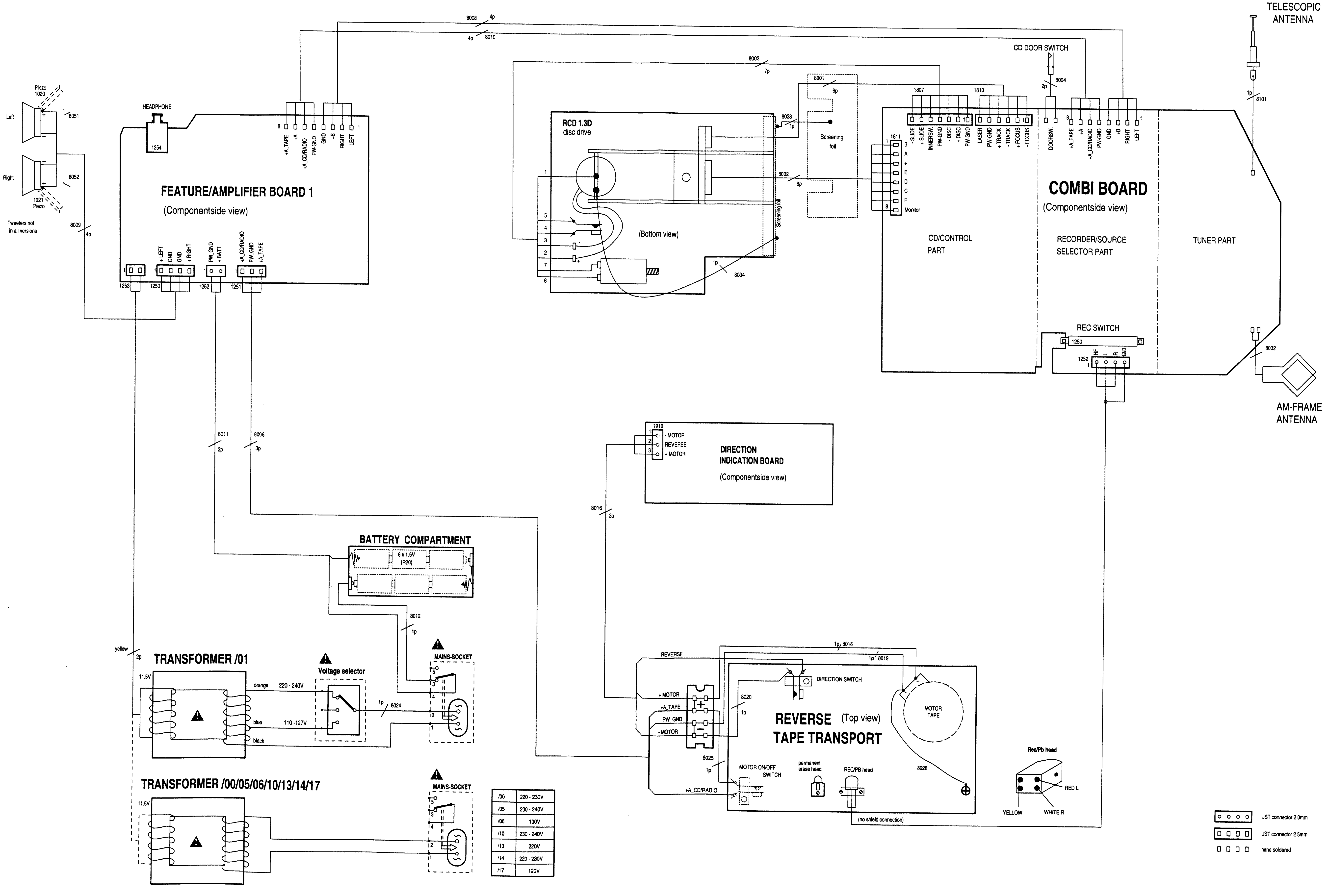
Pin	*Name*	*Direction*	*Description*
1	CL11	not connected	11.2896MHz clock output (3-state)
2	DOBM	signal processor -> Digital out (n.c.)	digital bi-phase mark output (3-state)
3	V1	not connected	versatile input pin of signal processor
4	V2	not connected	versatile input pin of signal processor
5	Test2	GND	test input of signal processor
6	Test1	GND	test input of signal processor
7	ISLICE	signal processor -> signal processor	current feedback from internal data slicer
8	HFIN	HF Pre-amp -> signal processor	comparator signal input
9	HFREF	HF Pre-amp -> signal processor	comparator signal input
10	IREF	-> signal processor	reference current pin (nom. VDD/2)
11	VDDA	-	+ supply (analog) of signal processor
12	VSSA	-	- supply (analog) of signal processor
13	CRIN	X-tal -> signal processor	crystal/resonator input of signal processor
14	CROUT	signal processor -> X-Tal	crystal/resonator output of signal processor
15	VDD1	-	+ supply for I/O-buffers of signal processor
16	VSS1	-	- supply for I/O-buffers of signal processor
17	CL16	signal processor -> DSIC2	16.9344MHz clock output of signal processor
18	MISC	not connected	general purpose DAC output (3-state)
19	DATA	signal processor -> DAC	serial data output of signal processor (3-state)
20	WCLK	signal processor -> DAC	word clock output of signal processor (3-state)
21	SCLK	signal processor -> DAC	serial bit clock output of signal processor (3-state)
22	MOTOR1	signal processor -> Disc motor driver	motor output1 of signal processor; versatile (3-state)
23	MOTOR2	not connected	motor output 2 of signal processor; versatile (3-state)
24	V5	not connected	versatile output pin of signal processor
25	V4	not connected	versatile output pin of signal processor
26	V3	not connected	versatile output pin of signal processor (open drain)
27	KILL	not connected	Mute output; programmable (open drain)
28	PORE	µP -> signal processor	power-on reset enable input (active low)
29	CLA	signal processor -> µP	4.2336MHz microprocessor clock output
30	DA	µP <-> signal processor	interface data I/O-line
31	CL	µP -> signal processor	interface clock input line
32	RAB	µP -> signal processor	interface R/W and acknowledge input
33	CFLG	not connected	correction flag output (open drain)
34-42	not used	-	
43	VSS2	-	Positive supply for internal logic of signal processor
44	VDD2	GND	Negative supply for internal logic of signal processor

WIRING DIAGRAM for AZ8050, AZ8051 and AZ8052


TELESCOPIC ANTENNA
CD DOOR SWITCH
8008 4p
4p 8010
8028 2p
8003 7p
8001 6p
8004 2p
1810
1807
1811
8101 1p
Piezo 1020
Left
8051
Right
8052
1021 Piezo
8009 4p
HEADPHONE
1254
+A_TAPE
+A
+A_CD/RADIO
PW-GND
GND
+B
RIGHT
LEFT
FEATURE/AMPLIFIER BOARD 1
(Componentside view)
+LEFT
GND
GND
+RIGHT
PW_GND
+BATT
+A_CD/RADIO
PW_GND
+A_TAPE
1253 1250 1252 1251
FEATURE/AMPLIFIER BOARD 2
(Eqoalizer,Remote Control)
GND
VOLUME
8011 2p
8006 3p
RCD 1.3D
disc drive
(Bottom view)
8033 1p
8002 8p
Screening foil
8034 1p
8021 4p
-SLIDE
+SLIDE
INNERSW
PW-GND
-DISC
+DISC
PW-GND
LASER
PW-GND
+TRACK
-TRACK
+FOCUS
-FOCUS
VOLUME
GND
DOORSW
+A_TAPE
+A
+A_CD/RADIO
PW-GND
GND
+B
RIGHT
LEFT
Monitor
COMBI BOARD
(Componentside view)
CD/CONTROL PART
RECORDER/SOURCE SELECTOR PART
TUNER PART
RC5
+uP
PW-GND
RC5
1822
REC SWITCH
1250
BIAS L R GND
1252
802 1p
AM-FRAME ANTENNA
IR-EYE BOARD
(Componentside view)
1900
RC5
PW-GND
+uP
RC5'
BATTERY COMPARTMENT
6 x 1.5V (R20)
8012 1p
TRANSFORMER /01
Voltage selector
MAINS-SOCKET
11.5V
yellow 2p
orange 220 - 240V
blue 110 - 127V
black
8024 1p
TRANSFORMER /00/05/06/10/13/14/17
MAINS-SOCKET
11.5V
yellow 2p
TAPE TRANSPORT
(Top view)
TAPE MOTOR
MOTOR ON/OFF SWITCH
permanent erase head
REC/PB head
shield
8007 1p
8005 4p
Rec/Pb head
WHITE R
YELLOW L
RED
SHIELD
✳ only for Remote control version
JST connector 2.0mm
JST connector 2.5mm
hand soldered

/00	220 - 230V
/05	230 - 240V
/06	100V
/10	230 - 240V
/13	220V
/14	220 - 230V
/17	120V

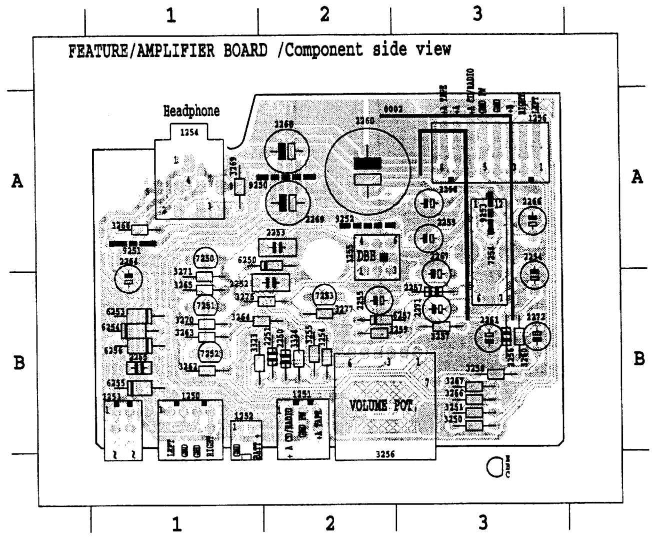
WIRING DIAGRAM for AZ8150


TELESCOPIC ANTENNA
8101
1p
8008
4p
4p
8010
8003
7p
CD DOOR SWITCH
8004
2p
8001
6p
1807
1810
- SLIDE
+ SLIDE
INNERSW.
PW-GND
- DISC
+ DISC
PW-GND
LASER
PW-GND
+ TRACK
- TRACK
+ FOCUS
- FOCUS
DOORSW.
+A_TAPE
+A
+A_CD/RADIO
PW-GND
GND
+B
RIGHT
LEFT
1811
B
A
+
E
D
C
F
Monitor
COMBI BOARD
(Componentside view)
CD/CONTROL PART
RECORDER/SOURCE SELECTOR PART
TUNER PART
REC SWITCH
1250
1252
HF
L
R
GND
8032
AM-FRAME ANTENNA
Piezo 1020
Left
8051
Right
8052
1021 Piezo
Tweeters not in all versions
8009
4p
HEADPHONE
1254
+A_TAPE
+A
+A_CD/RADIO
PW-GND
GND
+B
RIGHT
LEFT
FEATURE/AMPLIFIER BOARD 1
(Componentside view)
+ LEFT
GND
GND
+ RIGHT
PW_GND
+ BATT
+A_CD/RADIO
PW_GND
+A_TAPE
1253
1250
1252
1251
RCD 1.3D
disc drive
8033
1p
Screening foil
8002
8p
(Bottom view)
1p
8034
8011
2p
8006
3p
1910
- MOTOR
REVERSE
+ MOTOR
DIRECTION INDICATION BOARD
(Componentside view)
8016
3p
BATTERY COMPARTMENT
6 x 1.5V
(R20)
8012
1p
yellow
2p
TRANSFORMER /01
11.5V
orange
220 - 240V
blue
110 -127V
black
Voltage selector
1p
8024
MAINS-SOCKET
TRANSFORMER /00/05/06/10/13/14/17
11.5V
MAINS-SOCKET
REVERSE
1p 8018
1p 8019
DIRECTION SWITCH
+ MOTOR
+A_TAPE
PW_GND
- MOTOR
8020
1p
REVERSE (Top view)
TAPE TRANSPORT
MOTOR TAPE
8025
1p
MOTOR ON/OFF SWITCH
permanent erase head
REC/PB head
8026
+A_CD/RADIO
(no shield connection)
Rec/Pb head
RED L
YELLOW
WHITE R
JST connector 2.0mm
JST connector 2.5mm
hand soldered

/00	220 - 230V
/05	230 - 240V
/06	100V
/10	230 - 240V
/13	220V
/14	220 - 230V
/17	120V

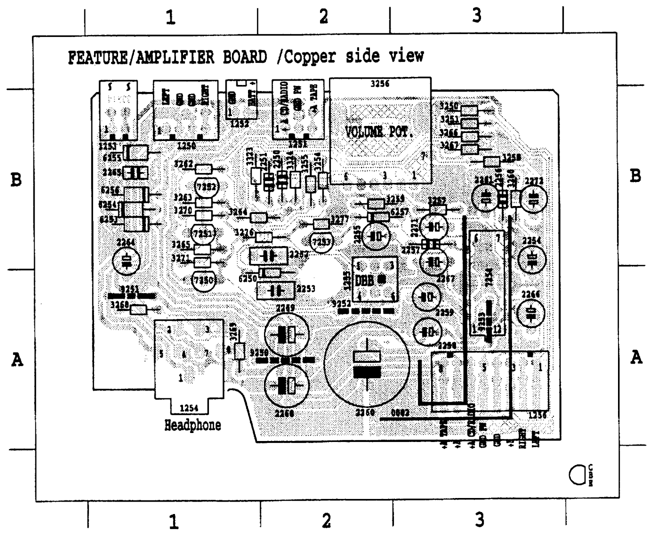
FEATURE 1 Board for AZ8050, AZ8051 and AZ8150

1250 B 1	2250 B 2	2257 B 3	2266 A 3	3251 B 3	3260 B 3	3268 A 1	6253 B 1	7252 B 1
1251 B 2	2251 B 2	2258 A 3	2267 B 3	3254 B 2	3262 B 1	3269 A 1	6254 B 1	7253 B 2
1252 B 1	2252 B 2	2259 A 3	2268 A 2	3255 B 2	3263 B 1	3270 B 1	6255 B 1	7254 A 3
1253 B 1	2253 A 2	2260 A 2	2269 A 2	3256 B 2	3264 B 2	3271 B 1	6256 B 1	9250 A 2
1254 A 1	2254 B 3	2261 B 3	2271 B 3	3257 B 3	3265 B 1	3276 B 2	6257 B 2	9251 A 1
1255 A 2	2255 B 2	2264 B 1	2272 B 3	3258 B 3	3266 B 3	3277 B 2	7250 A 1	9252 A 2
1256 A 3	2256 B 3	2265 B 1	3250 B 3	3259 B 2	3267 B 2	6250 B 1	7251 B 1	9253 A 3

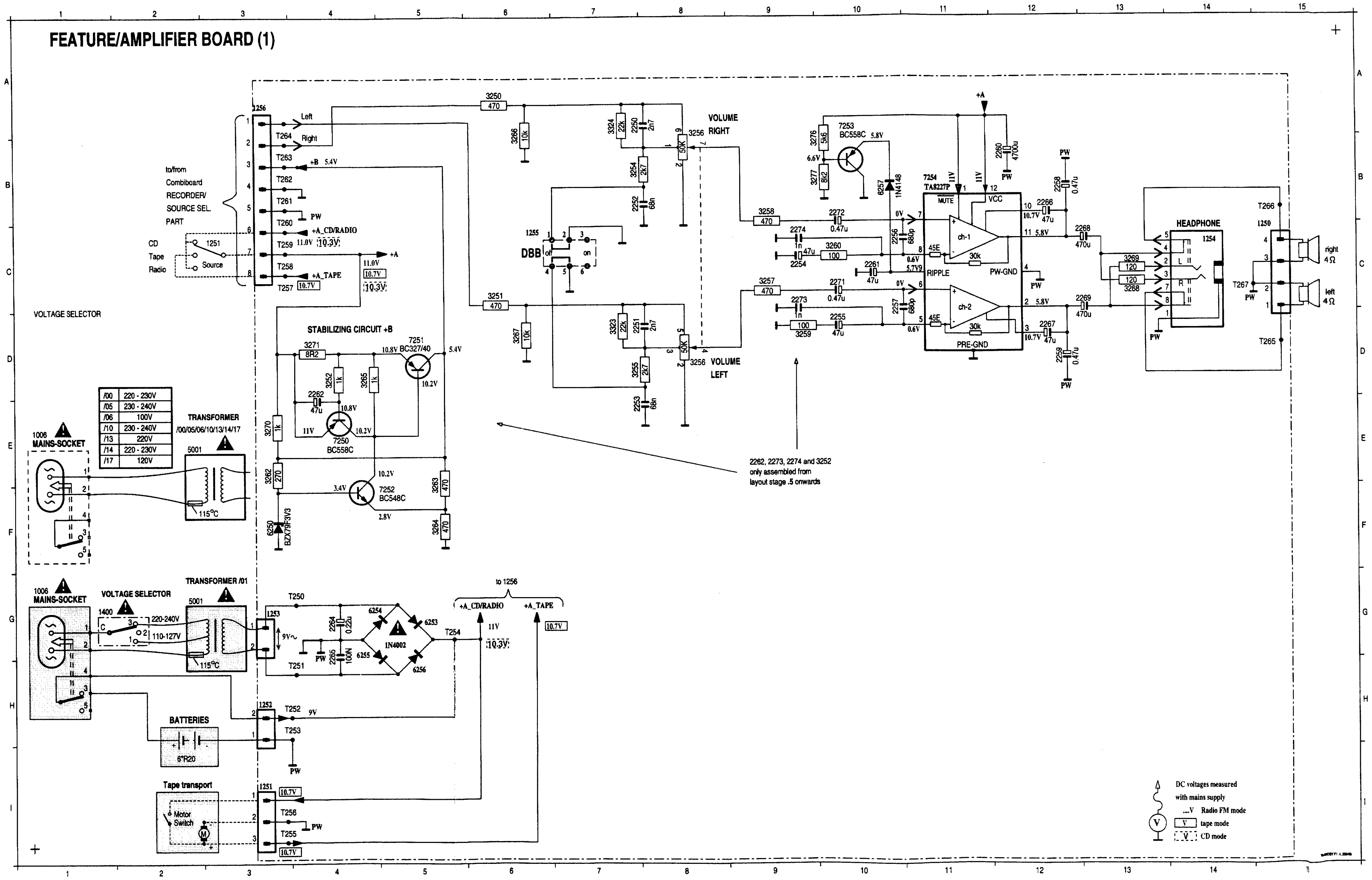

1
2
3
FEATURE/AMPLIFIER BOARD /Component side view
Headphone
1254
A
B
DBB
VOLUME POT.
3256

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

1250 B 1	2250 B 2	2257 B 3	2266 A 3	3251 B 3	3260 B 3	3268 A 1	6253 B 1	7252 B 1
1251 B 2	2251 B 2	2258 A 3	2267 B 3	3254 B 2	3262 B 1	3269 A 1	6254 B 1	7253 B 2
1252 B 1	2252 B 2	2259 A 3	2268 A 2	3255 B 2	3263 B 1	3270 B 1	6255 B 1	7254 A 3
1253 B 1	2253 A 2	2260 A 2	2269 A 2	3256 B 2	3264 B 2	3271 B 1	6256 B 1	9250 A 2
1254 A 1	2254 B 3	2261 B 3	2271 B 3	3257 B 3	3265 B 1	3276 B 2	6257 B 2	9251 A 1
1255 A 2	2255 B 2	2264 B 1	2272 B 3	3258 B 3	3266 B 3	3277 B 2	7250 A 1	9252 A 2
1256 A 3	2256 B 3	2265 B 1	3250 B 3	3259 B 2	3267 B 2	6250 B 1	7251 B 1	9253 A 3

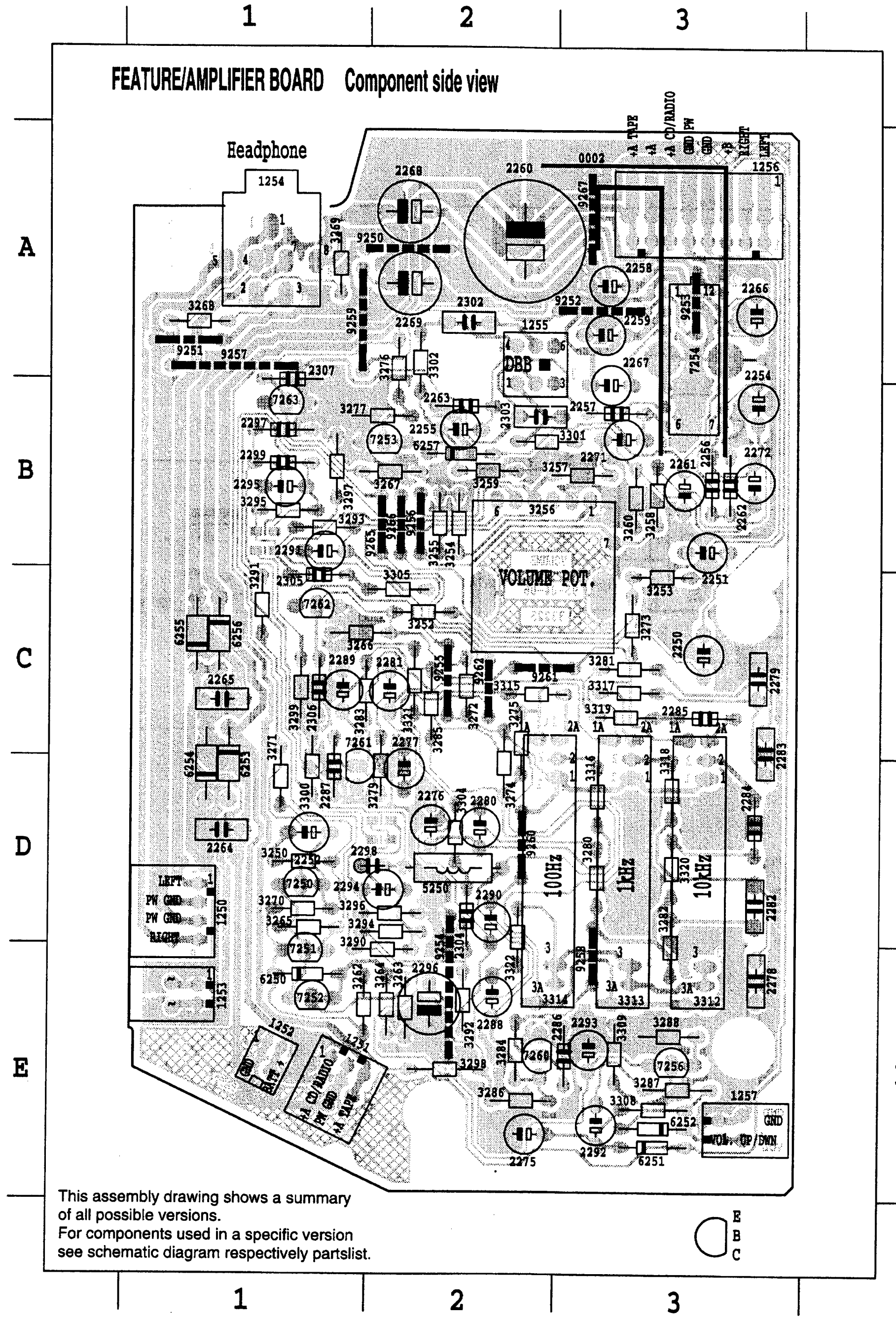

1
2
3
FEATURE/AMPLIFIER BOARD /Copper side view
VOLUME POT.
3256
B
A
Headphone
1254

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.


FEATURE/AMPLIFIER BOARD (1)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
to/from
Combiboard
RECORDER/
SOURCE SEL.
PART
Left
Right
+B 5.4V
PW
+A_CD/RADIO
+A_TAPE
11.0V
10.3V
10.7V
CD
Tape
Radio
Source
1251
1256
VOLTAGE SELECTOR
STABILIZING CIRCUIT +B
T251 BC327/40
T250 BC558C
T252 BC548C
BZX79F3V3
VOLUME RIGHT
VOLUME LEFT
DBB
off
on
1255
T253 BC558C
1N4148
T254 TA8227P
MUTE
VCC
RIPPLE
PW-GND
PRE-GND
ch-1
ch-2
45E
30k
HEADPHONE
1254
right 4Ω
left 4Ω
/00 220 - 230V
/05 230 - 240V
/06 100V
/10 230 - 240V
/13 220V
/14 220 - 230V
/17 120V
TRANSFORMER
/00/05/06/10/13/14/17
TRANSFORMER /01
1006 MAINS-SOCKET
115°C
1400
220-240V
110-127V
9V~
1N4002
to 1256
BATTERIES
6*R20
Tape transport
Motor
Switch
2262, 2273, 2274 and 3252
only assembled from
layout stage .5 onwards
DC voltages measured
with mains supply
_V Radio FM mode
V tape mode
V CD mode

1250	C15
1251	I 3
1252	H 3
1253	G 3
1254	C14
1255	C 6
1256	A 3
2250	A 7
2251	D 7
2252	B 7
2253	E 7
2254	C 9
2255	D10
2256	C10
2257	C10
2258	B12
2259	D12
2260	B12
2261	C10
2262	D 4
2264	G 4
2265	G 4
2266	B12
2267	D12
2268	C13
2269	C13
2271	C10
2272	B10
2273	C10
2274	C10
3250	A 6
3251	C 6
3252	D 4
3254	B 7
3255	D 7
3256	D 8
3256	A 8
3257	C 9
3258	B 9
3259	D 9
3260	C10
3262	E 3
3263	E 5
3264	F 5
3265	D 4
3266	A 6
3267	D 6
3268	C13
3269	C13
3270	E 3
3271	D 4
3276	B10
3277	B10
3323	D 7
3324	A 7
6250	F 3
6253	G 5
6254	G 4
6255	G 4
6256	H 5
6257	B10
7250	E 4
7251	D 5
7252	E 4
7253	A10
7254	B11
T250	G 4
T251	H 4
T252	H 4
T253	H 4
T254	G 5
T255	I 3
T256	I 3
T257	C 3
T258	C 3
T259	C 3
T260	B 3
T261	B 3
T262	B 3
T263	B 3
T264	A 3
T265	D15
T266	B15
T267	C14

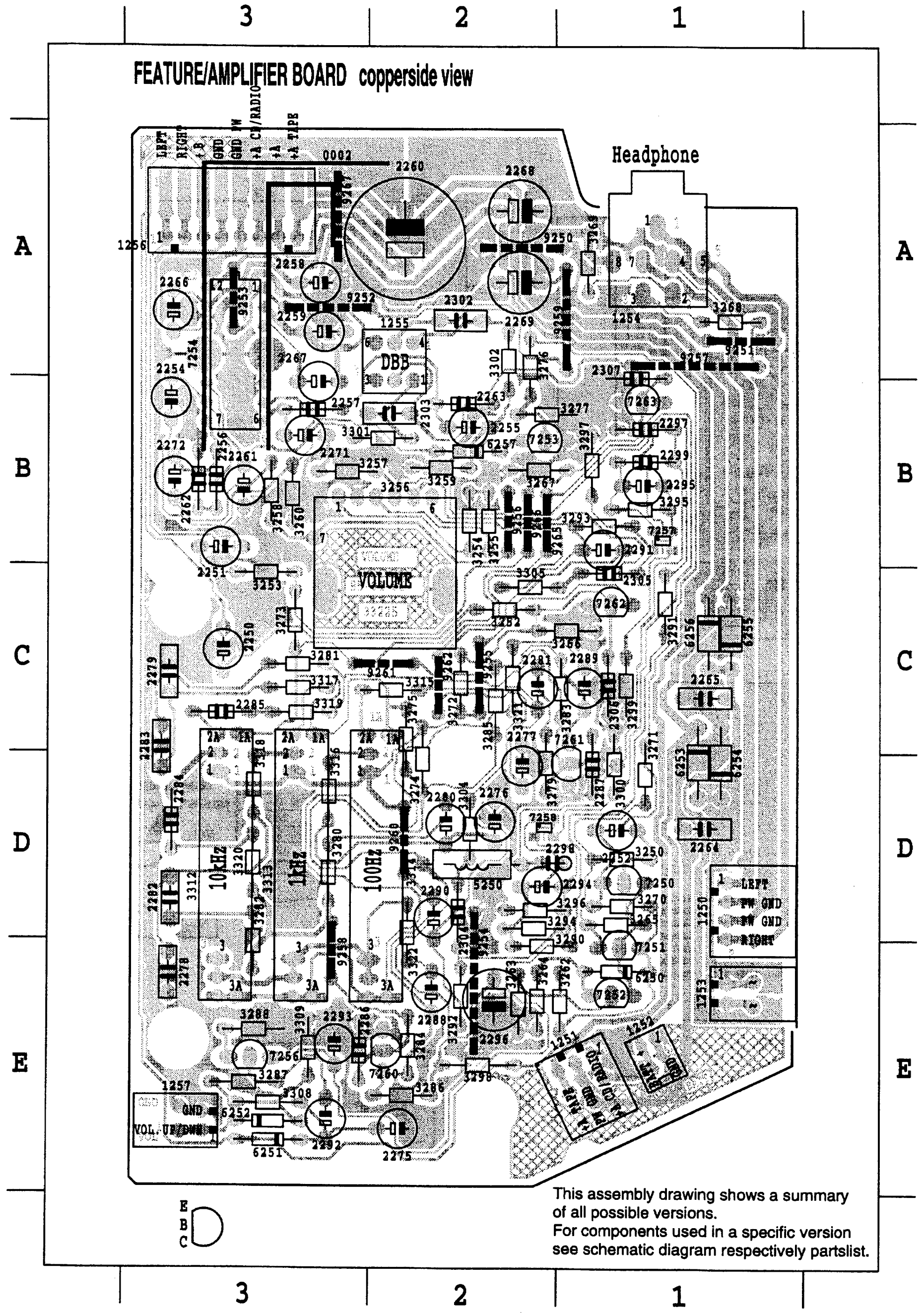
FEATURE 2 Board for AZ8052


1
2
3
A
B
C
D
E
Headphone
1254
VOLUME POT.
DBB
100Hz
1kHz
10kHz
LEFT
FM GND
FM GND
RIGHT
+A TAPE
+A
+A CD/RADIO
GND FM
GND
+B
RIGHT
LEFT
GND
VOL. UP/DWN
E
B
C

FEATURE/AMPLIFIER BOARD Component side view

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

1250	D 1
1251	E 1
1252	E 1
1253	E 1
1254	A 1
1255	A 2
1256	A 3
1257	E 3
2250	C 3
2251	B 3
2252	D 1
2254	B 3
2255	B 2
2256	B 3
2257	B 3
2258	A 3
2259	A 3
2260	A 2
2261	B 3
2262	B 3
2263	B 2
2264	D 1
2265	C 1
2266	A 3
2267	B 3
2268	A 2
2269	A 2
2271	B 3
2272	B 3
2275	E 2
2276	D 2
2277	D 2
2278	E 3
2279	C 3
2280	D 2
2281	C 2
2282	D 3
2283	C 3
2284	D 3
2285	C 3
2286	E 3
2287	D 1
2288	E 2
2289	C 1
2290	D 2
2291	B 1
2292	E 3
2293	E 3
2294	D 2
2295	B 1
2296	E 2
2297	B 1
2298	D 2
2299	B 1
2302	A 2
2303	B 2
2304	D 2
2305	C 1
2306	C 1
2307	B 1
3250	D 1
3252	C 2
3253	C 3
3254	B 2
3255	B 2
3256	B 2
3257	B 3
3258	B 3
3259	B 2
3260	B 3
3262	E 1
3263	E 2
3264	E 2
3265	D 1
3266	C 1
3267	B 2
3268	A 1
3269	A 1
3270	D 1
3271	D 1
3272	C 2
3273	C 3
3274	D 2
3275	C 2
3276	A 2
3277	B 2
3279	D 2
3280	D 3
3281	C 3
3282	E 3
3283	C 1
3284	E 2
3285	C 2
3286	E 2
3287	E 3
3288	E 3
3290	E 2
3291	C 1
3292	E 2
3293	B 1
3294	D 2
3295	B 1
3296	D 2
3297	B 1
3298	E 2
3299	C 1
3300	D 1
3301	B 2
3302	A 2
3304	D 2
3305	C 2
3308	E 3
3309	E 3
3312	D 3
3313	D 3
3314	D 2
3315	C 2
3316	D 3
3317	C 3
3318	D 3
3319	C 3
3320	D 3
3321	C 2
3322	D 2
5250	D 2
6250	E 1
6251	E 3
6252	E 3
6253	D 1
6254	D 1
6255	C 1
6256	C 1
6257	B 2
7250	D 1
7251	E 1
7252	E 1
7253	B 2
7254	A 3
7256	E 3
7260	E 2
7261	D 1
7262	C 1
7263	B 1
9250	A 2
9251	A 1
9252	A 3
9253	A 3
9254	E 2
9255	C 2
9256	B 2
9257	A 1
9258	E 3
9259	A 1
9260	D 2
9261	C 2
9262	C 2
9265	B 2
9266	B 2
9267	A 3
c001	A 3


3
2
1
A
B
C
D
E
Headphone
1254
VOLUME
DBB
10kHz
1kHz
100Hz
LEFT
FM GND
FM GND
RIGHT
GND
VOL. UP/DWN
E
B
C

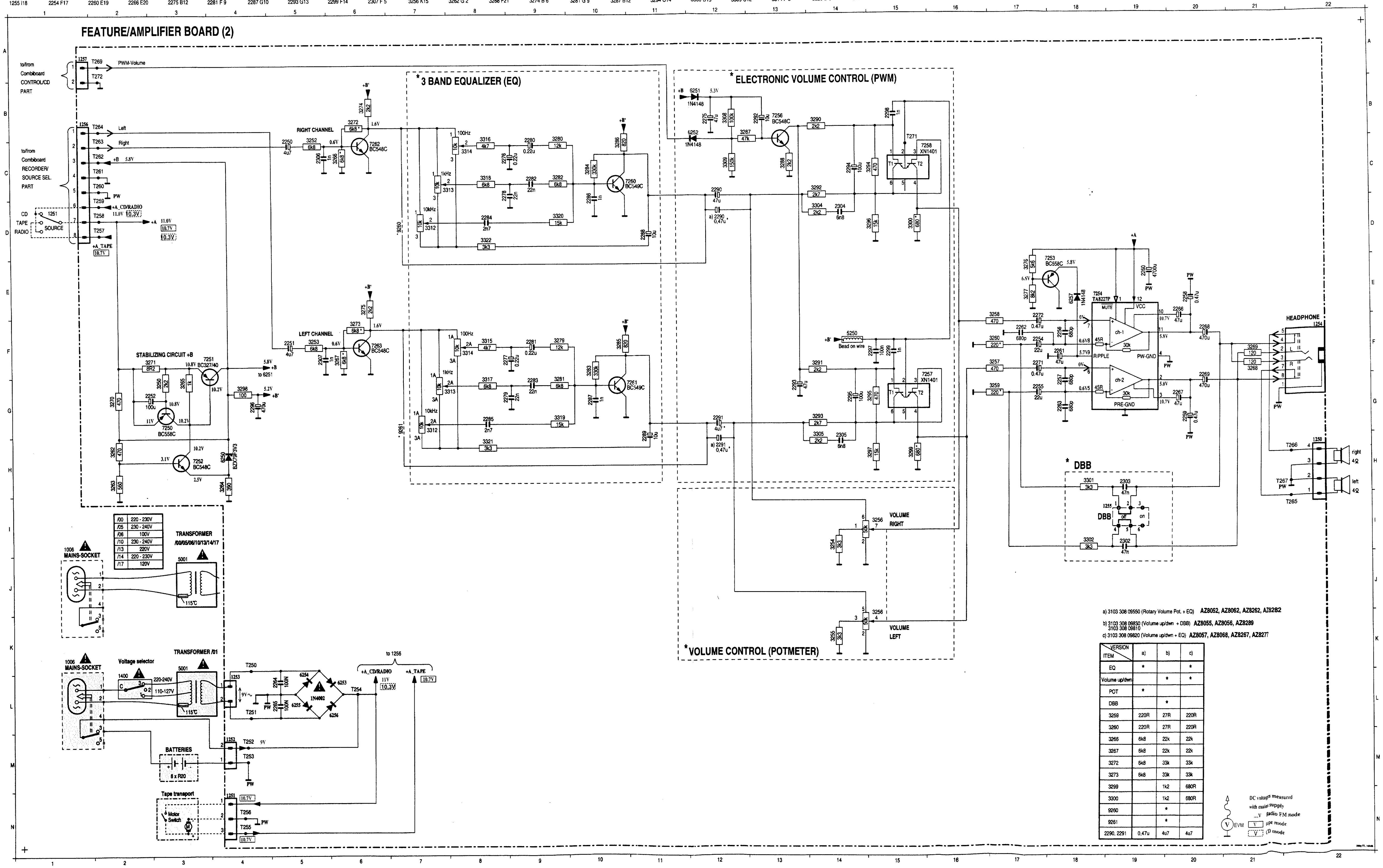
FEATURE/AMPLIFIER BOARD copperside view

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

7257	B 1
7258	D 2

FEATURE 2 Board for AZ8052

1250	H22
1251	N 4
1252	M 4
1253	L 4
1254	F22
1255	I18
1256	B 1
1257	A 1
2250	C 5
2251	F 5
2252	F 2
2254	F17
2255	G17
2256	F18
2257	G18
2258	E20
2259	G20
2260	E19
2261	F18
2262	F17
2263	G18
2264	L 5
2265	L 5
2266	E20
2267	G20
2268	F20
2269	G20
2271	F17
2272	F17
2275	B12
2276	C 8
2277	F 8
2278	C 8
2279	G 8
2280	C 9
2281	F 9
2282	C 9
2283	G 9
2284	D 8
2285	G 8
2286	C10
2287	G10
2288	D11
2289	G11
2290	C12
2291	G12
2292	B13
2293	G13
2294	C14
2295	G14
2296	G 4
2297	F15
2298	B14
2299	F14
2302	I19
2303	H19
2304	D14
2305	H14
2306	C 5
2307	F 5
3250	F 3
3252	C 5
3253	F 5
3254	I14
3255	K14
3256	K15
3256	I15
3257	F17
3258	F17
3259	G17
3260	F17
3262	G 2
3263	H 2
3264	H 4
3265	F 3
3266	C 6
3267	F 6
3268	F21
3269	F21
3270	F 2
3271	F 3
3272	B 6
3273	F 6
3274	B 6
3275	E 6
3276	E17
3277	E17
3279	F 9
3280	C 9
3281	G 9
3282	C 9
3283	F10
3284	C10
3285	F10
3286	C10
3287	B12
3288	C13
3290	B14
3291	F14
3292	C14
3293	G14
3294	C14
3295	G14
3296	D14
3297	H14
3298	F 4
3299	H15
3300	D15
3301	H18
3302	I18
3304	D13
3305	H13
3308	B12
3309	C12
3312	D 7
3312	G 7
3313	C 8
3313	G 8
3314	C 8
3314	F 8
3315	F 8
3316	C 8
3317	G 8
3318	C 8
3319	G 9
3320	D 9
3321	H 8
3322	D 8
5250	F14
6250	G 4
6251	B12
6252	B12
6253	L 6
6254	L 5
6255	L 5
6256	L 6
6257	E18
7250	G 3
7251	F 3
7252	G 3
7253	D18
7254	E19
7256	B13
7257	G15
7258	C15
7260	C10
7261	G10
7262	C 6
7263	F 6
9260	D 7
9261	G 7
T250	K 4
T251	L 4
T252	M 4
T253	M 4
T254	L 6
T255	N 4
T256	N 4
T257	D 2
T258	D 2
T259	C 2
T260	C 2
T261	C 2
T262	C 2
T263	B 2
T264	B 2
T265	I22
T266	H22
T267	H21
T269	A 2
T271	B15
T272	A 2



FEATURE/AMPLIFIER BOARD (2)
to/from Combiboard CONTROL/CD PART
PWM-Volume
to/from Combiboard RECORDER/ SOURCE SEL. PART
Left
Right
CD TAPE RADIO
SOURCE
+A_CD/RADIO
+A_TAPE
PW
RIGHT CHANNEL
LEFT CHANNEL
*3 BAND EQUALIZER (EQ)
100Hz
1kHz
10kHz
*ELECTRONIC VOLUME CONTROL (PWM)
STABILIZING CIRCUIT +B
*VOLUME CONTROL (POTMETER)
VOLUME RIGHT
VOLUME LEFT
* DBB
DBB
off
on
HEADPHONE
right 4Ω
left 4Ω
TA8227P
MUTE
VCC
ch-1
ch-2
RIPPLE
PW-GND
PRE-GND
Bead on wire
TRANSFORMER /00/05/06/10/13/14/17
MAINS-SOCKET
TRANSFORMER /01
Voltage selector
220-240V
110-127V
115°C
BATTERIES
6 x R20
Tape transport
Motor Switch
to 1256
BC548C
BC549C
BC558C
BC327/40
XN1401
1N4148
1N4002
BZX79F3V3

/00	220 - 230V
/05	230 - 240V
/06	100V
/10	230 - 240V
/13	220V
/14	220 - 230V
/17	120V

a) 3103 308 09550 (Rotary Volume Pot. + EQ) **AZ8052, AZ8062, AZ8262, AZ8282**

b) 3103 308 09830 (Volume up/dwn + DBB) **AZ8055, AZ8056, AZ8289**
3103 308 09810

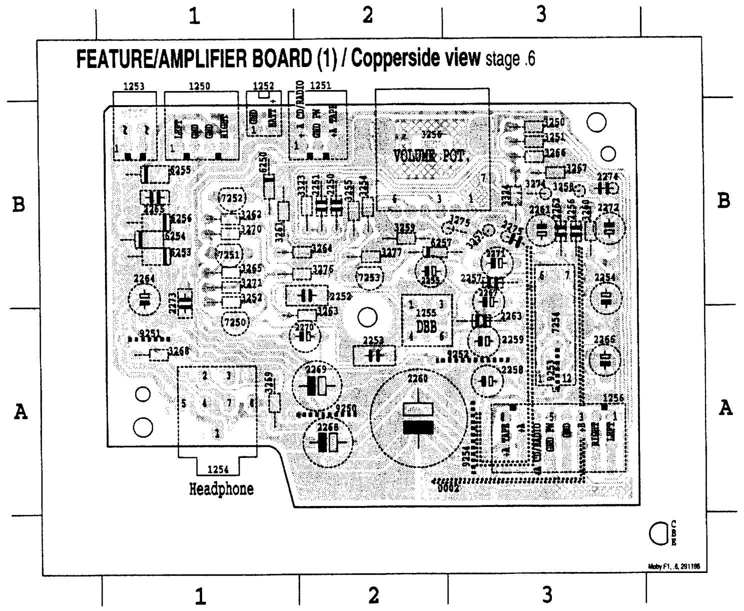
c) 3103 308 09820 (Volume up/dwn + EQ) **AZ8057, AZ8068, AZ8267, AZ8277**

VERSION / ITEM	a)	b)	c)
EQ	*		*
Volume up/dwn		*	*
POT	*		
DBB		*	
3259	220R	27R	220R
3260	220R	27R	220R
3266	6k8	22k	22k
3267	6k8	22k	22k
3272	6k8	33k	33k
3273	6k8	33k	33k
3299		1k2	680R
3300		1k2	680R
9260		*	
9261		*	
2290, 2291	0,47u	4u7	4u7

DC voltages measured with mains supply
EVM
...V Radio FM mode
V tape mode
V CD mode

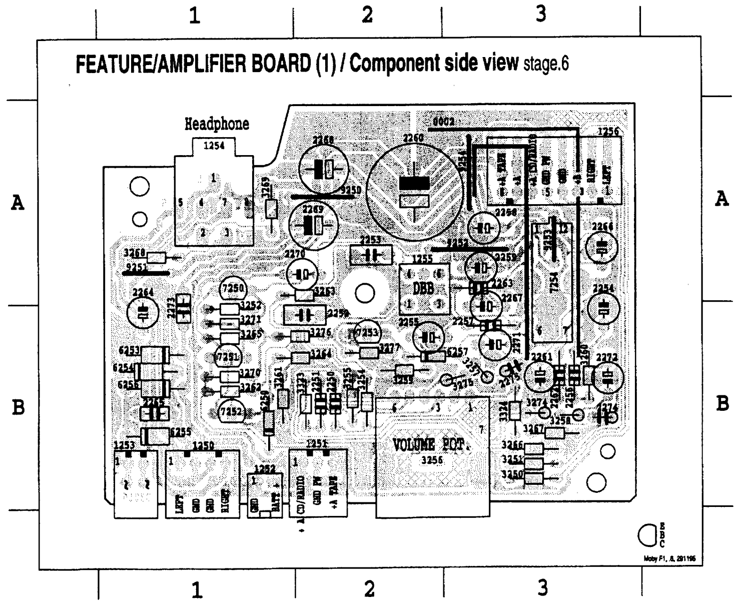
FEATURE/AMPLIFIER Board '1' for AZ8050, AZ8051 and AZ8150

1250 B 1	2252 B 2	2261 B 3	2270 A 2	3254 B 2	3263 A 2	3274 B 3	6255 B 1	9251 A 1
1251 B 2	2253 A 2	2262 B 3	2271 B 3	3255 B 2	3264 B 2	3275 B 3	6256 B 1	9252 A 3
1252 B 1	2254 B 3	2263 A 3	2272 B 3	3256 B 2	3265 B 1	3276 B 2	6257 B 2	9253 A 3
1253 B 1	2255 B 2	2264 B 1	2273 B 1	3257 B 3	3266 B 3	3277 B 2	7250 A 1	9254 A 3
1254 A 1	2256 B 3	2265 B 1	2274 B 3	3258 B 3	3267 B 3	3323 B 2	7251 B 1	
1255 A 2	2257 B 3	2266 A 3	2275 B 3	3259 B 2	3268 A 1	3324 B 3	7252 B 1	
1256 A 3	2258 A 3	2267 B 3	3250 B 3	3260 B 3	3269 A 1	6250 B 1	7253 B 2	
2250 B 2	2259 A 3	2268 A 2	3251 B 3	3261 B 1	3270 B 1	6253 B 1	7254 A 3	
2251 B 2	2260 A 2	2269 A 2	3252 B 1	3262 B 1	3271 B 1	6254 B 1	9250 A 2	

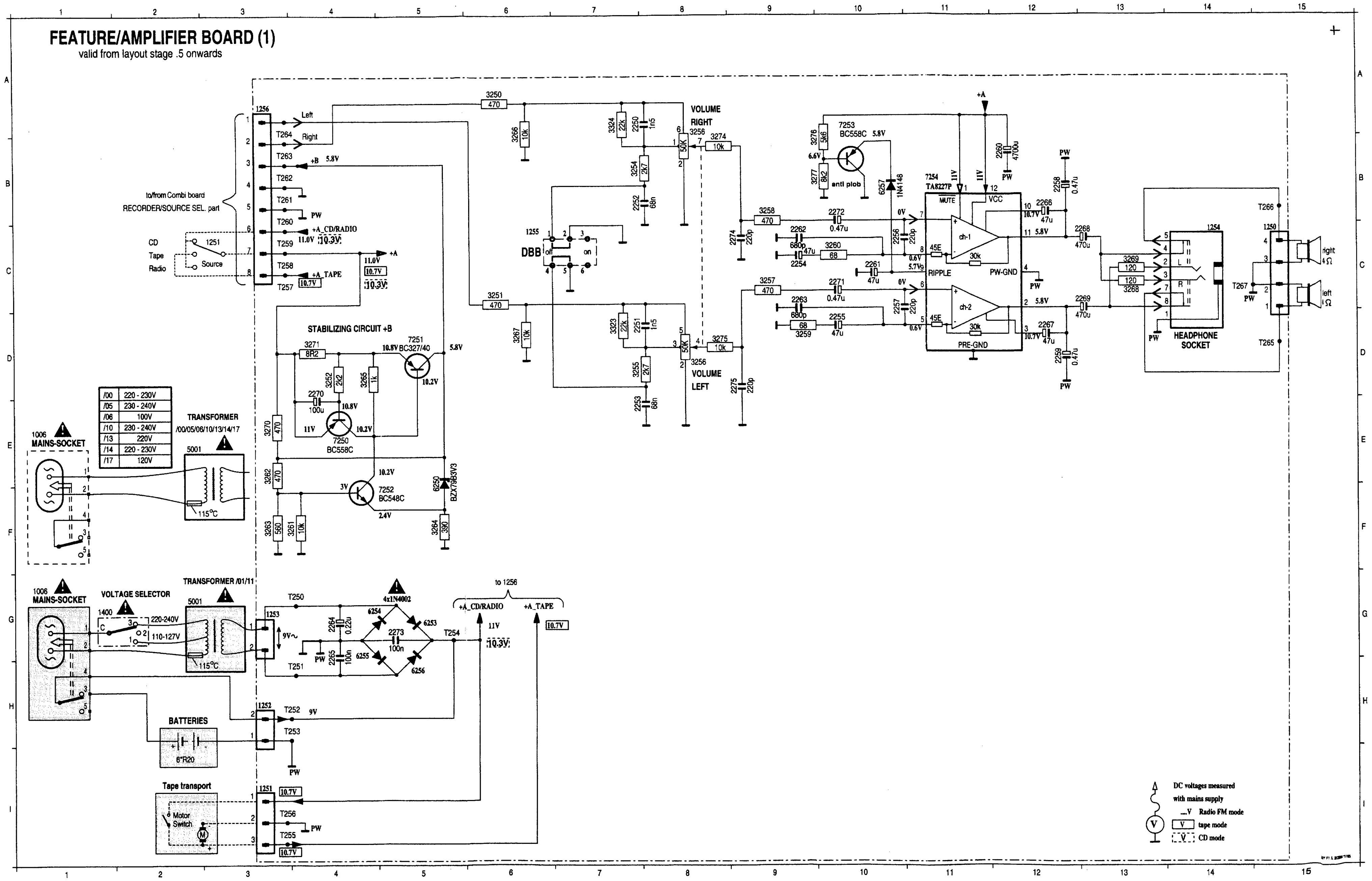

FEATURE/AMPLIFIER BOARD (1) / Copperside view stage .6
1
2
3
A
B
1253
1250
1252
1251
VOLUME POT.
DBB
Headphone
1254

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

1250 B 1	2252 B 2	2261 B 3	2270 A 2	3254 B 2	3263 A 2	3274 B 3	6255 B 1	9251 A 1
1251 B 2	2253 A 2	2262 B 3	2271 B 3	3255 B 2	3264 B 2	3275 B 3	6256 B 1	9252 A 3
1252 B 1	2254 B 3	2263 A 3	2272 B 3	3256 B 2	3265 B 1	3276 B 2	6257 B 2	9253 A 3
1253 B 1	2255 B 2	2264 B 1	2273 B 1	3257 B 3	3266 B 3	3277 B 2	7250 A 1	9254 A 3
1254 A 1	2256 B 3	2265 B 1	2274 B 3	3258 B 3	3267 B 3	3323 B 2	7251 B 1	
1255 A 2	2257 B 3	2266 A 3	2275 B 3	3259 B 2	3268 A 1	3324 B 3	7252 B 1	
1256 A 3	2258 A 3	2267 B 3	3250 B 3	3260 B 3	3269 A 1	6250 B 1	7253 B 2	
2250 B 2	2259 A 3	2268 A 2	3251 B 3	3261 B 1	3270 B 1	6253 B 1	7254 A 3	
2251 B 2	2260 A 2	2269 A 2	3252 B 1	3262 B 1	3271 B 1	6254 B 1	9250 A 2	

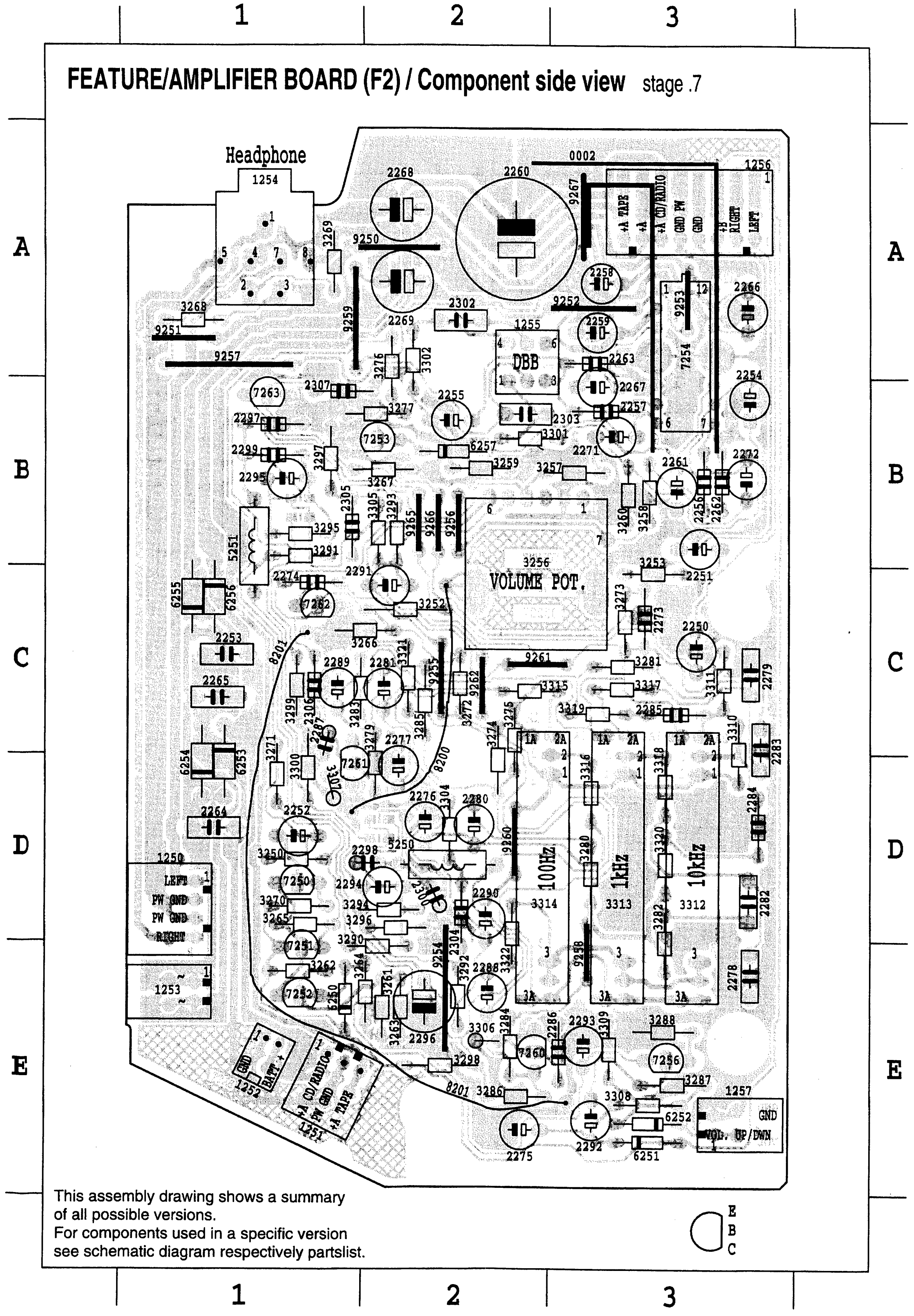

FEATURE/AMPLIFIER BOARD (1) / Component side view stage.6
1
2
3
A
B
Headphone
1254
1256
VOLUME POT.
3256
DBB
1253
1250
1252
1251

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.


FEATURE/AMPLIFIER BOARD (1)
valid from layout stage .5 onwards
to/from Combi board
RECORDER/SOURCE SEL. part
CD
Tape
Radio
1251
Source
1256
T264
Left
Right
T263
+B 5.8V
T262
T261
T260
PW
T259
+A_CD/RADIO
T258
+A_TAPE
T257
11.0V
10.7V
10.3V
+A
3250
470
3251
470
3266
10k
3267
10k
3324
22k
3323
22k
2250
1n5
2251
1n5
3254
2k7
3255
2k7
2252
68n
2253
68n
VOLUME RIGHT
VOLUME LEFT
3256
50K
3274
10k
3275
10k
1255
DBB
off
on
2274
220p
2275
220p
3258
470
3257
470
2262
680p
2254
47u
3260
68
2263
680p
3259
68
2255
47u
2272
0.47u
2271
0.47u
2256
220p
2257
220p
2261
47u
7253
BC558C
5.8V
3278
5k6
3277
8k2
6.6V
anti plob
6257
1N4148
7254
TDA8227P
MUTE
VCC
ch-1
ch-2
RIPPLE
PW-GND
PRE-GND
30k
2260
4700u
2258
0.47u
2259
0.47u
2266
47u
2267
47u
2268
470u
2269
470u
3269
120
3268
120
1254
HEADPHONE SOCKET
T266
T267
T265
1250
right 4Ω
left 4Ω
STABILIZING CIRCUIT +B
3271
8R2
7251
BC327/40
3252
22Ω
3265
1k
2270
100u
7250
BC558C
3270
470
3262
470
7252
BC548C
6250
BZX79B3V3
3263
560
3261
10k
3264
390
1006
MAINS-SOCKET
/00 220 - 230V
/05 230 - 240V
/06 100V
/10 230 - 240V
/13 220V
/14 220 - 230V
/17 120V
TRANSFORMER
/00/05/06/10/13/14/17
5001
115°C
VOLTAGE SELECTOR
1400
220-240V
110-127V
TRANSFORMER /01/11
1253
T250
T251
9V~
2264
2200u
2265
100n
4x1N4002
6254
6253
6255
6256
2273
100n
T254
to 1256
+A_CD/RADIO
+A_TAPE
11V
10.3V
10.7V
1252
T252
9V
T253
BATTERIES
6*R20
Tape transport
Motor Switch
T256
T255
DC voltages measured
with mains supply
....V Radio FM mode
V tape mode
V CD mode

1250	C15
1251	I 3
1252	H 3
1253	G 3
1254	C14
1255	C 6
1256	A 3
2250	A 7
2251	D 7
2252	B 7
2253	E 7
2254	C 9
2255	D10
2256	C10
2257	C10
2258	B12
2259	D12
2260	B12
2261	C10
2262	C 9
2263	C 9
2264	G 4
2265	G 4
2266	B12
2267	D12
2268	C13
2269	C13
2270	D 4
2271	C10
2272	B10
2273	G 5
2274	G 9
2275	D 9
3250	A 6
3251	C 6
3252	D 4
3254	B 7
3255	D 7
3256	D 8
3256	A 8
3257	C 9
3258	B 9
3259	D 9
3260	C10
3261	F 4
3262	E 3
3263	F 3
3264	F 5
3265	D 4
3266	A 6
3267	D 6
3268	C13
3269	C13
3270	E 3
3271	D 4
3274	B 8
3275	D 8
3276	B10
3277	B10
3323	D 7
3324	A 7
6250	F 5
6253	G 5
6254	G 4
6255	G 4
6256	H 5
6257	B10
7250	E 4
7251	D 5
7252	E 4
7253	A10
7254	B11

FEATURE/AMPLIFIER Board '2' for AZ8052

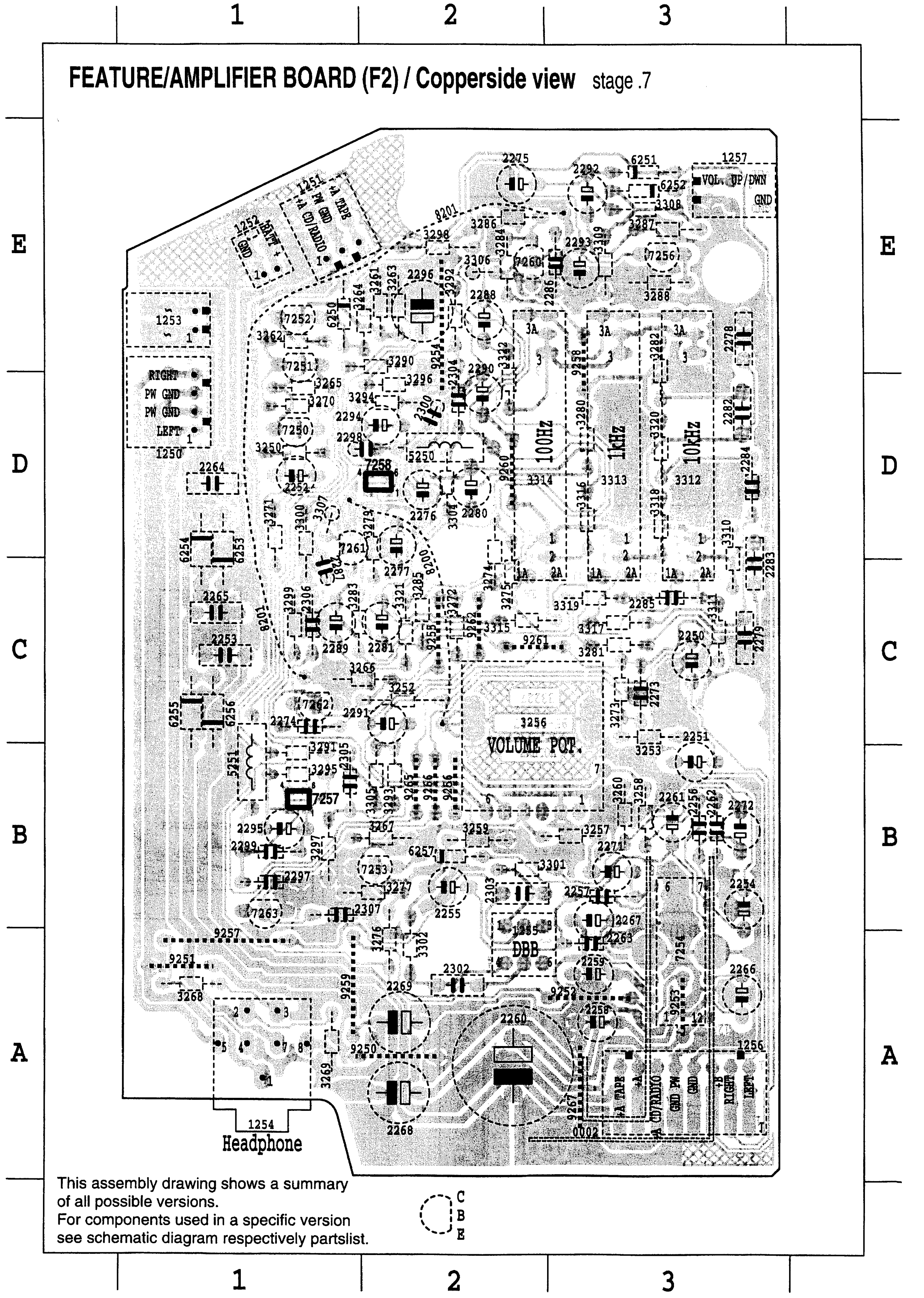


1
2
3
A
B
C
D
E
Headphone
1254
VOLUME POT.
3256
DBB
100Hz
1kHz
10kHz
+A TAPE
+A CD/RADIO
GND PW
GND
RIGHT
LEFT
VOL. UP/DWN
GND
LEFT
PW GND
PW GND
RIGHT
1250
1253
1252
1251
1256
1257
E
B
C

FEATURE/AMPLIFIER BOARD (F2) / Component side view stage .7

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

1250	D	1
1251	E	1
1252	E	1
1253	E	1
1254	A	1
1255	A	2
1256	A	3
1257	E	3
2250	C	3
2251	B	3
2252	D	1
2253	C	1
2254	B	3
2255	B	2
2256	B	3
2257	B	3
2258	A	3
2259	A	3
2260	A	2
2261	B	3
2262	B	3
2263	A	3
2264	D	1
2265	C	1
2266	A	3
2267	B	3
2268	A	2
2269	A	2
2271	B	3
2272	B	3
2273	C	3
2274	C	1
2275	E	2
2276	D	2
2277	D	2
2278	E	3
2279	C	3
2280	D	2
2281	C	2
2282	D	3
2283	C	3
2284	D	3
2285	C	3
2286	E	3
2287	C	1
2288	E	2
2289	C	1
2290	D	2
2291	C	2
2292	E	3
2293	E	3
2294	D	2
2295	B	1
2296	E	2
2297	B	1
2298	D	2
2299	B	1
2300	D	2
2302	A	2
2303	B	2
2304	D	2
2305	B	1
2306	C	1
2307	B	1
3250	D	1
3252	C	2
3253	C	3
3256	B	2
3257	B	3
3258	B	3
3259	B	2
3260	B	3
3261	E	2
3262	E	1
3263	E	2
3264	E	2
3265	D	1
3266	C	2
3267	B	2
3268	A	1
3269	A	1
3270	D	1
3271	D	1
3272	C	2
3273	C	3
3274	D	2
3275	C	2
3276	A	2
3277	B	2
3279	D	2
3280	D	3
3281	C	3
3282	E	3
3283	C	1
3284	E	2
3285	C	2
3286	E	2
3287	E	3
3288	E	3
3290	E	2
3291	B	1
3292	E	2
3293	B	2
3294	D	2
3295	B	1
3296	D	2
3297	B	1
3298	E	2
3299	C	1
3300	D	1
3301	B	2
3302	A	2
3304	D	2
3305	B	2
3306	E	2
3307	D	1
3308	E	3
3309	E	3
3310	D	3
3311	C	3
3312	D	3
3313	D	3
3314	D	2
3315	C	2
3316	D	3
3317	C	3
3318	D	3
3319	C	3
3320	D	3
3321	C	2
3322	D	2
5250	D	2
5251	B	1
6250	E	1
6251	E	3
6252	E	3
6253	D	1
6254	D	1
6255	C	1
6256	C	1
6257	B	2
7250	D	1
7251	E	1
7252	E	1
7253	B	2
7254	A	3
7256	E	3
7257	B	1 ©
7258	D	2 ©
7260	E	2
7261	D	1
7262	C	1
7263	B	1
8200	D	2
8201	C	1
9250	A	2
9251	A	1
9252	A	3
9253	A	3
9254	E	2
9255	C	2
9256	B	2
9257	A	1
9258	E	3
9259	A	1
9260	D	2
9261	C	2
9262	C	2
9265	B	2
9266	B	2
9267	A	3



1
2
3
E
D
C
B
A
VOLUME POT.
3256
DBB
100Hz
1kHz
10kHz
Headphone
1254
VOL. UP/DWN
GND
RIGHT
PW GND
PW GND
LEFT
1250
1253
1252
1251
1256
1257
+A TAPE
+A CD/RADIO
GND PW
GND
C
B
E

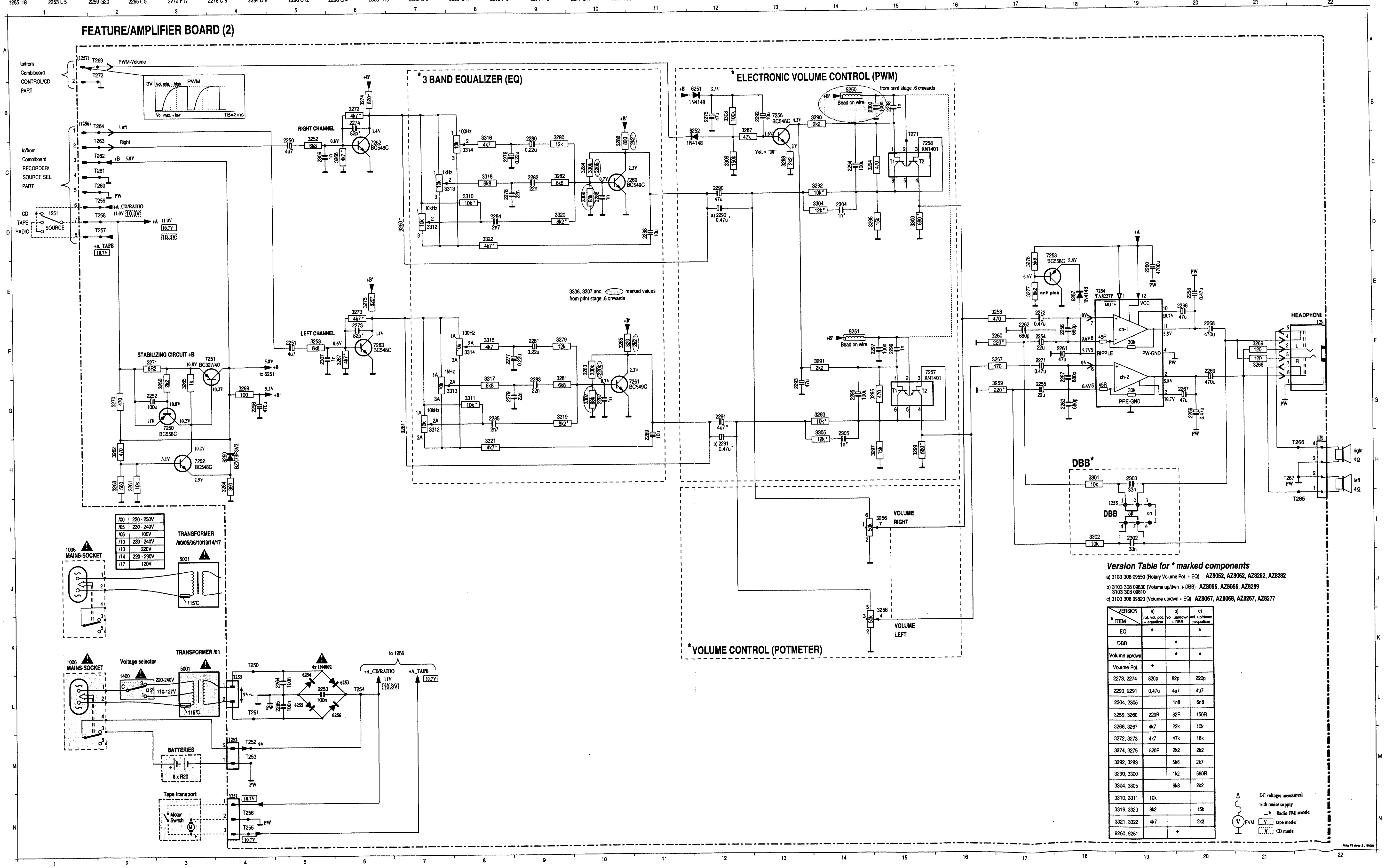
FEATURE/AMPLIFIER BOARD (F2) / Copperside view stage .7

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

Moby F2 stage .7, 171195

FEATURE/AMPLIFIER Board ‘2’ for AZ8052

1250 H22
1251 N 4
1252 M 4
1253 L 4
1254 F22
1255 I18
1256 B 1
1257 A 1
2250 C 5
2251 F 5
2252 F 2
2253 L 5
2254 F17
2255 G17
2256 F18
2257 G18
2258 E20
2259 G20
2260 E19
2261 F18
2262 F17
2263 G18
2264 L 5
2265 L 5
2266 E20
2267 G20
2268 F20
2269 G20
2271 F17
2272 F17
2273 F 6
2274 B6
2275 B12
2276 C 8
2277 F 8
2278 C 8
2279 G 8
2280 C 9
2281 F 9
2282 C 9
2283 G 9
2284 D 8
2285 G 8
2286 C10
2287 G10
2288 D11
2289 G11
2290 C12
2291 G12
2292 B13
2293 G13
2294 C14
2295 G14
2296 G 4
2297 F15
2298 F15
2299 B15
2300 B15
2302 I19
2303 H19
2304 D14
2305 H14
2306 C 5
2307 F 5
3250 F 3
3252 C 5
3253 F 5
3256 K15
3256 I15
3257 F17
3258 F17
3259 G17
3260 F17
3261 H 2
3262 G 2
3263 H 2
3264 H 4
3265 F 3
3266 C 6
3267 F 6
3268 F21
3269 F21
3270 F 2
3271 F 3
3272 B 6
3273 F 6
3274 B 6
3275 E 6
3276 E17
3277 E17
3279 F 9
3280 C 9
3281 G 9
3282 C 9
3283 F10
3284 C10
3285 F10
3286 C10
3287 B12
3288 C13
3290 B14
3291 F14
3292 C14
3293 G14
3294 C14
3295 G14
3296 D14
3297 H14
3298 F 4
3299 H15
3300 D15
3301 H18
3302 I18
3304 D13
3305 H13
3306 D10
3307 G10
3308 B12
3309 C12
3310 D 8
3311 G 8
3312 D 7
3312 G 7
3313 C 8
3313 G 8
3314 C 8
3314 F 8
3315 F 8
3316 C 8
3317 G 8
3318 C 8
3319 G 9
3320 D 9
3321 H 8
3322 D 8
5250 B14
5251 F14
6250 G 4
6251 B12
6252 B12
6253 L 6
6254 L 5
6255 L 5
6256 L 6
6257 E18
7250 G 3
7251 F 3
7252 G 3
7253 D18
7254 E19
7256 B13
7257 G15
7258 C15
7260 C10
7261 G10
7262 C 6
7263 F 6
9260 D 7
9261 G 7


FEATURE/AMPLIFIER BOARD (2)
to/from Combiboard CONTROL/CD PART
T269 PWM-Volume
T272
PWM
3V Vol. min. = high
Vol. max. = low
TB=2ms
to/from Combiboard RECORDER/ SOURCE SEL. PART
T264 Left
T263 Right
T262 +B 5.8V
T261
T260
T259 PW
+A_CD/RADIO
T258 11.0V 10.3V
T257
+A_TAPE 10.7V
CD TAPE RADIO 1251 SOURCE
RIGHT CHANNEL
LEFT CHANNEL
7262 BC548C
7263 BC548C
*3 BAND EQUALIZER (EQ)
100Hz
1kHz
10kHz
7260 BC549C
7261 BC549C
3306, 3307 and marked values from print stage .6 onwards
*ELECTRONIC VOLUME CONTROL (PWM)
6251 1N4148
6252 1N4148
5250 Bead on wire
from print stage .6 onwards
7256 BC548C
Vol. = "10"
T271
7258 XN1401
5251 Bead on wire
7257 XN1401
STABILIZING CIRCUIT +B
7251 BC327/40
7250 BC558C
7252 BC548C
6250 BZX79-3V3
to 6251
7253 BC558C
anti plob
7254 TA8227P
MUTE
VCC
ch-1
ch-2
RIPPLE
PW-GND
PRE-GND
HEADPHONE
T266 right 4Ω
T267 PW left 4Ω
T265
DBB*
DBB off on
*VOLUME CONTROL (POTMETER)
3256 VOLUME RIGHT
3256 VOLUME LEFT
1006 MAINS-SOCKET
TRANSFORMER /00/05/06/10/13/14/17
5001
115°C
/00 220 - 230V
/05 230 - 240V
/06 100V
/10 230 - 240V
/13 220V
/14 220 - 230V
/17 120V
Voltage selector
1400
220-240V
110-127V
TRANSFORMER /01
4x 1N4002
T250
T251
T254
to 1256
+A_CD/RADIO 11V 10.3V
+A_TAPE 10.7V
BATTERIES
6 x R20
T252 9V
T253
Tape transport
Motor Switch
T256
T255 PW
DC voltages measured with mains supply
....V Radio FM mode
V tape mode
V CD mode
EVM

Version Table for * marked components

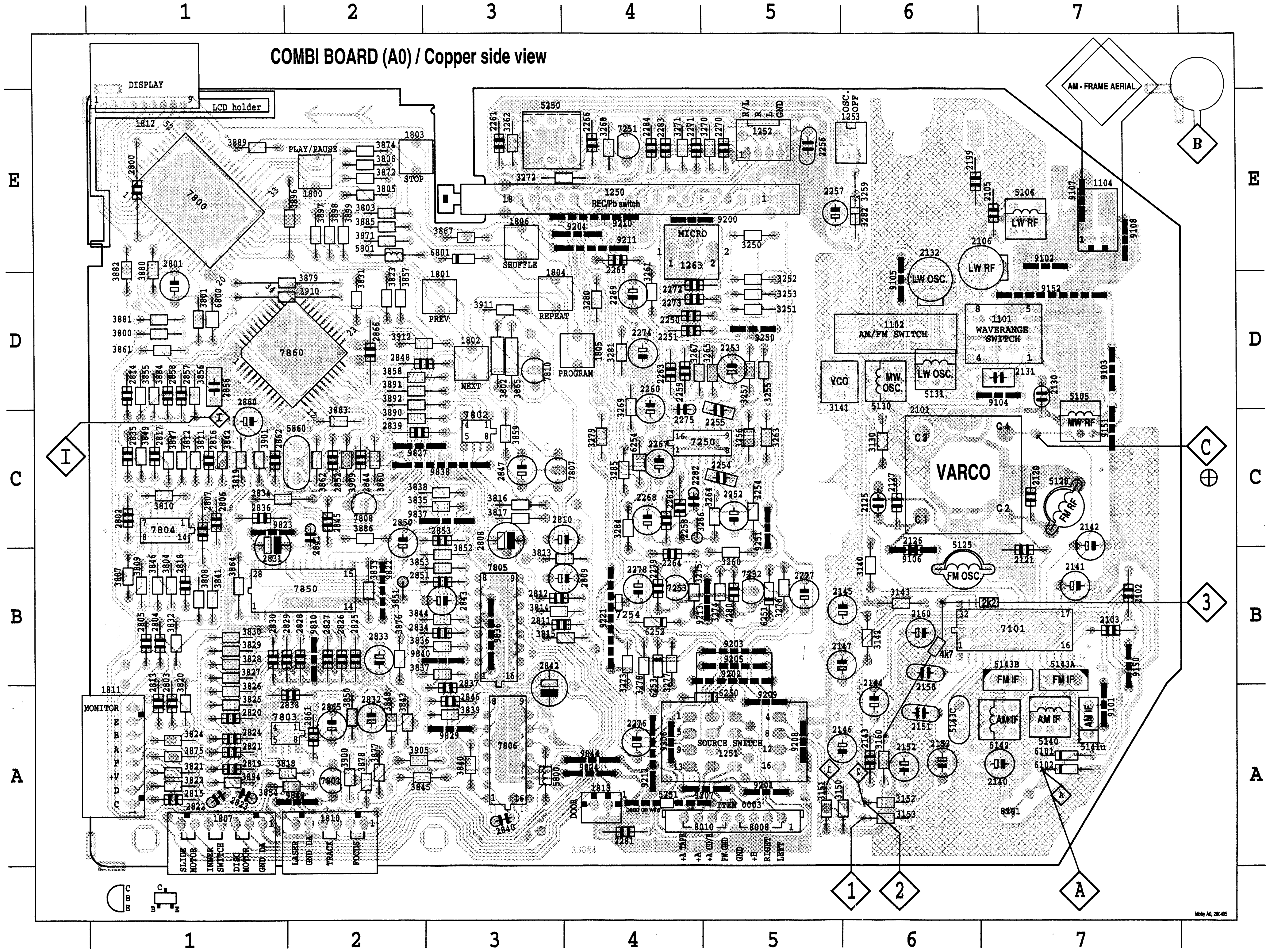
a) 3103 308 09550 (Rotary Volume Pot. + EQ) **AZ8052, AZ8062, AZ8262, AZ8282**

b) 3103 308 09830 (Volume up/dwn + DBB) **AZ8055, AZ8056, AZ8289**
3103 308 09810

c) 3103 308 09820 (Volume up/dwn + EQ) **AZ8057, AZ8068, AZ8267, AZ8277**

VERSION / * ITEM	a) rot. vol. pot. + equalizer	b) vol. up/down + DBB	c) vol. up/down +equalizer
EQ	*		*
DBB		*	
Volume up/dwn		*	*
Volume Pot.	*		
2273, 2274	820p	82p	220p
2290, 2291	0,47u	4u7	4u7
2304, 2305		1n8	6n8
3259, 3260	220R	82R	150R
3266, 3267	4k7	22k	10k
3272, 3273	4k7	47k	18k
3274, 3275	820R	2k2	2k2
3292, 3293		5k6	2k7
3299, 3300		1k2	680R
3304, 3305		6k8	2k2
3310, 3311	10k		
3319, 3320	8k2		15k
3321, 3322	4k7		3k3
9260, 9261		*	

COMBI BOARD (A0)


COMBI BOARD (A0) / Copper side view
1
2
3
4
5
6
7
E
D
C
B
A
DISPLAY
LCD holder
PLAY/PAUSE
STOP
7800
7860
7850
7804
7803
7805
7806
7802
SHUFFLE
PREV
REPEAT
NEXT
PROGRAM
MICRO
1263
1250
REC/Pb switch
1252
R/L
GND
OSC. OFF
1253
5250
7250
7251
7252
7253
7254
1102
AM/FM SWITCH
1101
WAVERANGE SWITCH
VCO
MW OSC.
LW OSC.
LW RF
MW RF
FM RF
FM OSC
VARCO
C3
C4
C1
C2
7101
FM IF
AM IF
AM IF
5143B
5143A
5143C
1104
AM - FRAME AERIAL
SOURCE SWITCH
1251
MONITOR
1807
SLIDE MOTOR
INNER SWITCH
DISC MOTOR
GND DA
1810
LASER
GND DA
TRACK
FOCUS
DOOR
1813
8010
8008
ITEM 0003
+A TAPE
+A
+A CD/R
FM GND
GND
+B
RIGHT
LEFT
2k2
4k7
8101
33084
I
B
C
3
1
2
A

1101	D	7
1102	D	6
1104	E	7
2101	C	6
2102	B	7
2103	B	7
2105	E	7
2106	E	7
2120	C	7
2121	B	7
2125	C	6
2126	B	6
2127	C	6
2130	D	7
2131	D	7
2132	D	6
2140	A	7
2141	B	7
2142	C	7
2143	A	6
2144	A	6
2145	B	5
2146	A	5
2147	B	5
2150	B	6
2151	A	6
2152	A	6
2153	A	6
2160	B	6
2199	E	6
3130	C	6
3140	B	6
3141	D	5
3142	B	6
3143	B	6
3150	A	6
3151	A	5
3152	A	6
3153	A	6
3160	A	6
5105	C	7
5106	E	7
5120	C	7
5125	B	6
5130	D	6
5131	D	6
5140	A	7
5141	A	7
5142	A	7
5143A	B	7
5143B	B	7
5143C	A	6
6101	A	7
6102	A	7
8101	A	7
9101	A	7
9102	E	7
9103	D	7
9104	D	7
9105	D	6
9106	B	6
9107	E	7
9108	E	7
9150	B	7
9151	C	7
9152	D	7

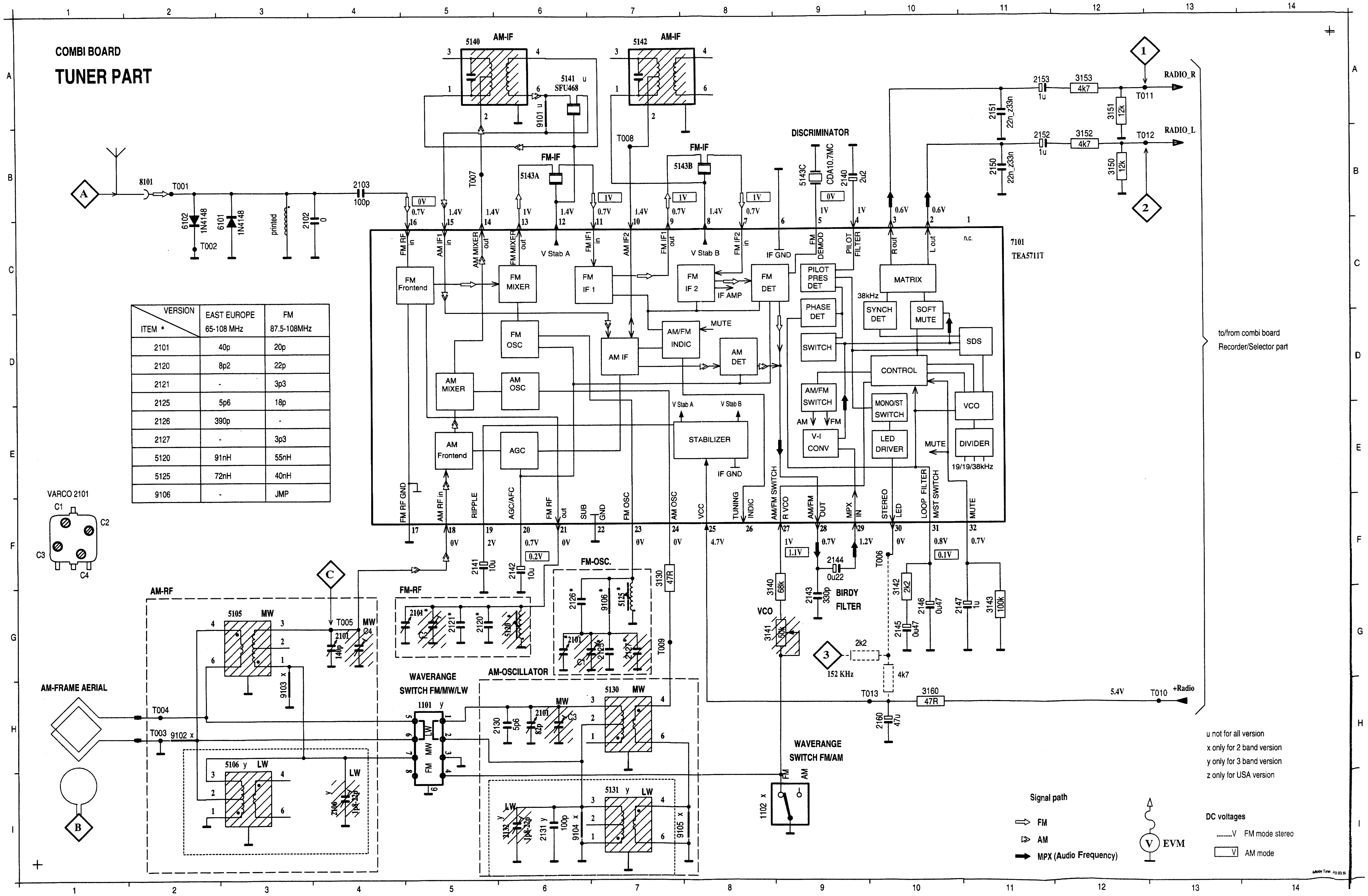
1250	E	4
1251	A	5
1252	E	5
1253	E	6
1263	E	4
2250	D	4
2251	D	4
2252	C	5
2253	D	5
2254	C	5
2255	C	5
2256	E	5
2257	E	5
2258	C	4
2259	D	4
2260	D	4
2261	E	3
2262	C	4
2263	D	4
2264	B	4
2265	E	4
2266	E	4
2267	C	4
2268	C	4
2269	D	4
2270	E	5
2271	E	4
2272	D	4
2273	D	4
2274	D	4
2275	C	4
2276	A	4
2277	B	5
2278	B	4
2279	B	4
2280	B	5
2281	A	4
2282	C	4
2283	E	4
2284	E	4
3250	E	5
3251	D	5
3252	D	5
3253	D	5
3254	C	5
3255	D	5
3256	C	5
3257	D	5
3259	E	6
3260	B	5
3261	D	4
3262	E	3
3263	C	5
3264	C	5
3265	D	5
3266	C	4
3267	D	4
3268	E	4
3269	D	4
3270	E	5
3271	E	4
3272	E	4
3273	B	4
3274	B	5
3275	B	4
3276	B	5
3277	B	4
3278	B	4
3279	C	4
3280	D	4
3281	D	4
3282	E	6
3284	C	4
3285	C	4
5250	E	3
6250	A	5
6251	B	5
6252	B	4
6253	B	4
6254	C	4
7251	E	4
7252	B	5
7253	B	4
8008	A	5
9200	E	4
9201	A	5
9202	B	5
9203	B	5
9204	E	4
9205	B	5
9206	A	4
9207	A	5
9208	A	5
9209	A	5
9210	E	4
9211	E	4
9212	A	4
9213	B	5
9220	A	4
9221	B	4
9250	D	5
9251	C	5

1800	E	2
1801	D	3
1802	D	3
1803	E	2
1804	D	3
1805	D	4
1806	E	3
1807	A	1
1810	A	2
1811	A	1
1812	E	1
1813	A	4
2800	E	1
2801	D	1
2802	C	1
2803	A	1
2804	B	1
2805	B	1
2806	C	1
2807	C	1
2808	C	3
2809	B	3
2810	C	3
2811	B	3
2812	B	3
2813	A	1
2814	D	1
2815	A	1
2816	C	1
2817	C	1
2818	B	1
2819	A	1
2820	A	1
2821	A	1
2822	A	1
2823	A	1
2824	A	1
2825	B	2
2826	B	2
2827	B	2
2828	B	2
2829	B	1
2830	B	1
2831	C	1
2832	A	2
2833	B	2
2834	B	3
2835	C	1
2836	C	1
2837	A	3
2838	A	2
2839	C	2
2840	A	3
2841	C	2
2842	A	3
2843	B	3
2844	C	2
2845	C	2
2846	A	3
2847	C	3
2848	D	2
2850	C	2
2851	B	3
2852	C	2
2853	C	3
2856	D	1
2857	D	1
2858	D	1
2860	C	1
2861	A	2
2862	C	1
2865	A	2
2866	D	2
3800	D	1
3801	D	1
3802	D	3
3803	E	2
3804	B	1
3805	E	2
3806	E	2
3807	B	1
3808	B	1
3809	B	1
3810	C	1
3811	C	1
3812	C	1
3813	B	4
3814	B	3
3815	B	4
3816	C	3
3817	C	3
3818	A	2
3819	C	1
3820	A	1
3821	A	1
3822	A	1
3823	D	2
3824	A	1
3825	A	1
3826	A	1
3827	B	1
3828	B	1
3829	B	1
3830	B	1
3831	D	2
3832	B	1
3833	B	2
3834	C	1
3835	C	3
3836	B	3
3837	B	3
3838	C	3
3839	A	3
3840	A	3
3841	B	1
3842	C	1
3843	A	2
3844	B	3
3845	A	2
3846	B	1
3847	C	1
3848	A	2
3849	C	1
3850	A	2
3851	B	2
3852	B	3
3853	B	3
3854	A	2
3855	D	1
3856	D	1
3857	D	2
3858	D	2
3859	C	3
3860	C	2
3861	D	1
3862	C	2
3863	C	2
3864	B	1
3865	D	3
3867	E	3
3871	E	2
3872	E	2
3874	E	2
3875	A	1
3876	B	2
3877	A	2
3878	A	2
3879	D	2
3880	E	1
3881	D	1
3882	E	1
3884	D	1
3885	E	2
3886	C	2
3889	E	1
3890	C	2
3891	D	2
3892	D	2
3894	A	1
3896	E	2
3897	E	2
3898	E	2
3899	E	2
3900	A	2
3901	C	1
3905	A	2
3909	C	2
3910	D	2
3911	D	3
3912	D	2
5800	A	3
5801	E	2
5860	C	2
6800	D	1
6801	E	3
7801	A	2
7805	B	3
7806	A	3
7807	C	3
7808	C	2
7810	D	3
9810	B	2
9822	B	2
9823	C	1
9824	A	4
9827	C	2
9829	A	3
9836	B	3
9837	C	3
9838	C	3
9840	B	3
9842	A	2
9844	A	4
7101	B	7
7250	C	4
7254	B	4
7800	E	1
7802	C	3
7803	A	1
7804	C	1
7850	B	2
7860	D	1

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

COMBI BOARD

TUNER PART

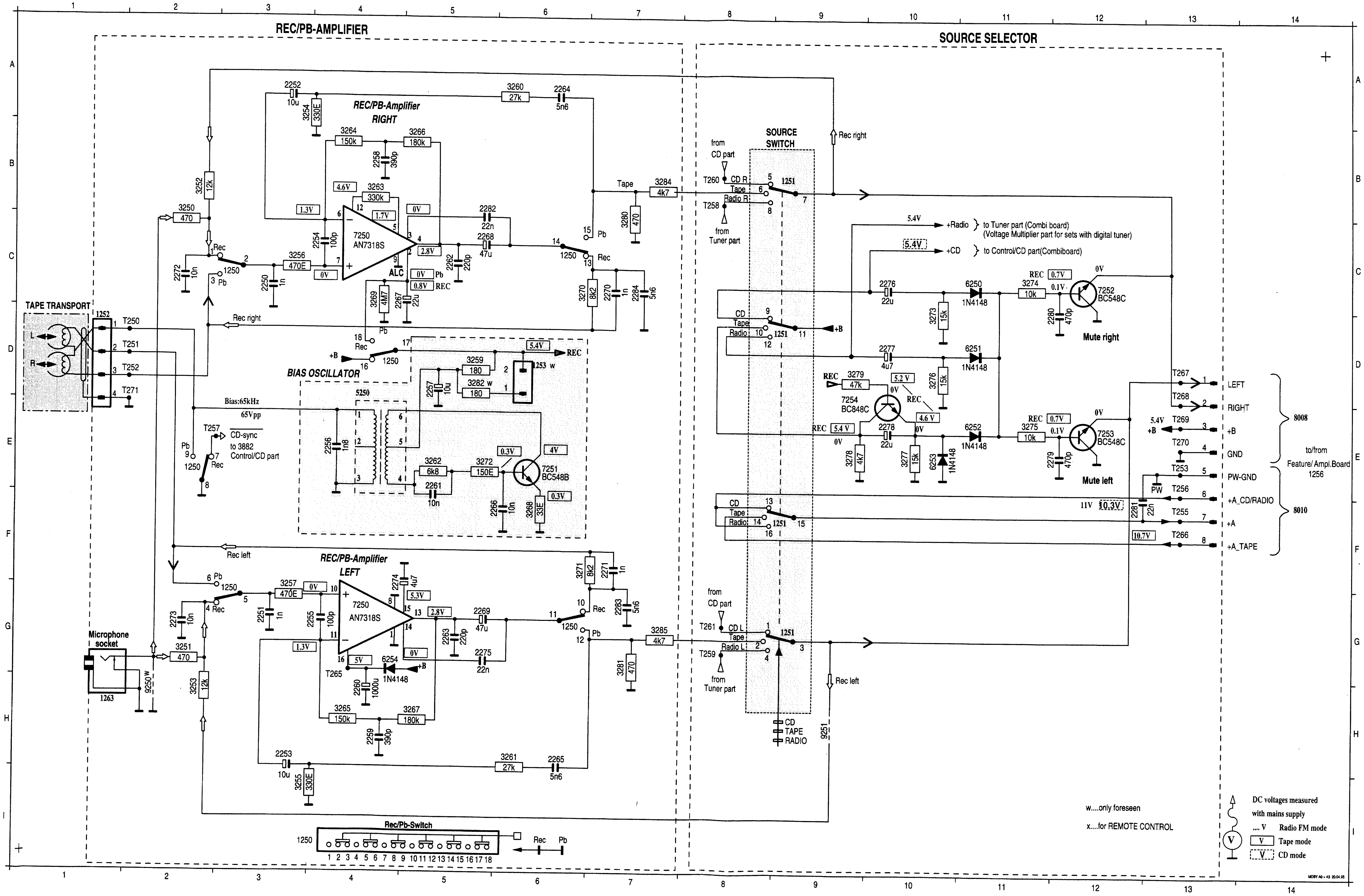

AM-IF
5140
5141 u
SFU468
9101 u
5142
AM-IF
FM-IF
5143A
FM-IF
5143B
DISCRIMINATOR
5143C
CDA10.7MC
2140
2u2
T007
T008
8101
T001
T002
6102
1N4148
6101
1N4148
printed
2102
2103
100p
A
B
C
1
2
3
FM RF in
AM IF1 in
AM MIXER out
FM MIXER out
V Stab A
FM IF1 in
AM IF2
FM IF1 out
V Stab B
FM IF2 in
IF GND
FM DEMOD
PILOT FILTER
R out
L out
n.c.
7101
TEA5711T
FM Frontend
FM MIXER
FM IF 1
FM IF 2
IF AMP
FM DET
PILOT PRES DET
MATRIX
38kHz
PHASE DET
SYNCH DET
SOFT MUTE
MUTE
AM/FM INDIC
FM OSC
AM IF
AM DET
SWITCH
SDS
CONTROL
AM MIXER
AM OSC
AM/FM SWITCH
MONO/ST SWITCH
VCO
STABILIZER
V-I CONV
LED DRIVER
DIVIDER
19/19/38kHz
AM Frontend
AGC
IF GND
FM RF GND
AM RF in
RIPPLE
AGC/AFC
FM RF out
SUB GND
FM OSC
AM OSC
VCC
TUNING INDIC
AM/FM SWITCH
R VCO
AM/FM OUT
MPX IN
STEREO LED
LOOP FILTER
M/ST SWITCH
MUTE
2153
1u
3153
4k7
RADIO_R
T011
2151
22n_z33n
3151
12k
2152
1u
3152
4k7
RADIO_L
T012
2150
22n_z33n
3150
12k
to/from combi board
Recorder/Selector part
VARCO 2101
C1
C2
C3
C4
AM-RF
5105
MW
T005
MW
C4
9103 x
AM-FRAME AERIAL
T004
T003
9102 x
5106 y
LW
LW
2106
FM-RF
2120*
2121*
5120*
FM-OSC.
2126*
9106*
5125*
2127*
2125*
3130
47R
T009
WAVERANGE SWITCH FM/MW/LW
1101 y
AM-OSCILLATOR
5130
MW
2130
5p6
2101
C3
5131 y
LW
2132
2131 y
100p
9104 x
9105 x
2141
10u
2142
10u
2144
0u22
2143
330p
BIRDY FILTER
3140
68k
VCO
3141
50k
152 KHz
2k2
4k7
T006
T013
3160
47R
5.4V
T010
+Radio
2160
47u
3142
2k2
2146
0u47
2145
0u47
2147
1u
3143
100k
WAVERANGE SWITCH FM/AM
1102 x
FM
AM
u not for all version
x only for 2 band version
y only for 3 band version
z only for USA version
Signal path
FM
AM
MPX (Audio Frequency)
EVM
DC voltages
........V FM mode stereo
V AM mode

VERSION / ITEM *	EAST EUROPE 65-108 MHz	FM 87.5-108MHz
2101	40p	20p
2120	8p2	22p
2121	-	3p3
2125	5p6	18p
2126	390p	-
2127	-	3p3
5120	91nH	55nH
5125	72nH	40nH
9106	-	JMP

1101	H 5
1102	I 8
1104	H 1
2101	G 6
2101	G 5
2101	H 6
2101	G 4
2102	B 3
2103	B 4
2106	I 4
2120	G 5
2121	G 5
2125	G 7
2126	G 6
2127	G 7
2130	H 6
2131	I 6
2132	I 6
2140	B 9
2141	F 5
2142	F 6
2143	G 9
2144	F 9
2145	G10
2146	G10
2147	G10
2150	B11
2151	A11
2152	B11
2153	A11
2160	H10
3130	F 7
3140	F 8
3141	G 8
3142	F10
3143	G11
3150	B12
3151	A12
3152	B12
3153	A12
3160	H10
5105	G 3
5106	H 3
5120	G 6
5125	G 7
5130	H 7
5131	I 7
5140	A 5
5141	A 6
5142	A 7
5143A	B 6
5143B	B 8
5143C	B 9
6101	B 2
6102	B 2
7101	C11
8101	B 2
9101	A 6
9102	H 2
9103	H 3
9104	I 6
9105	I 7
9106	G 7

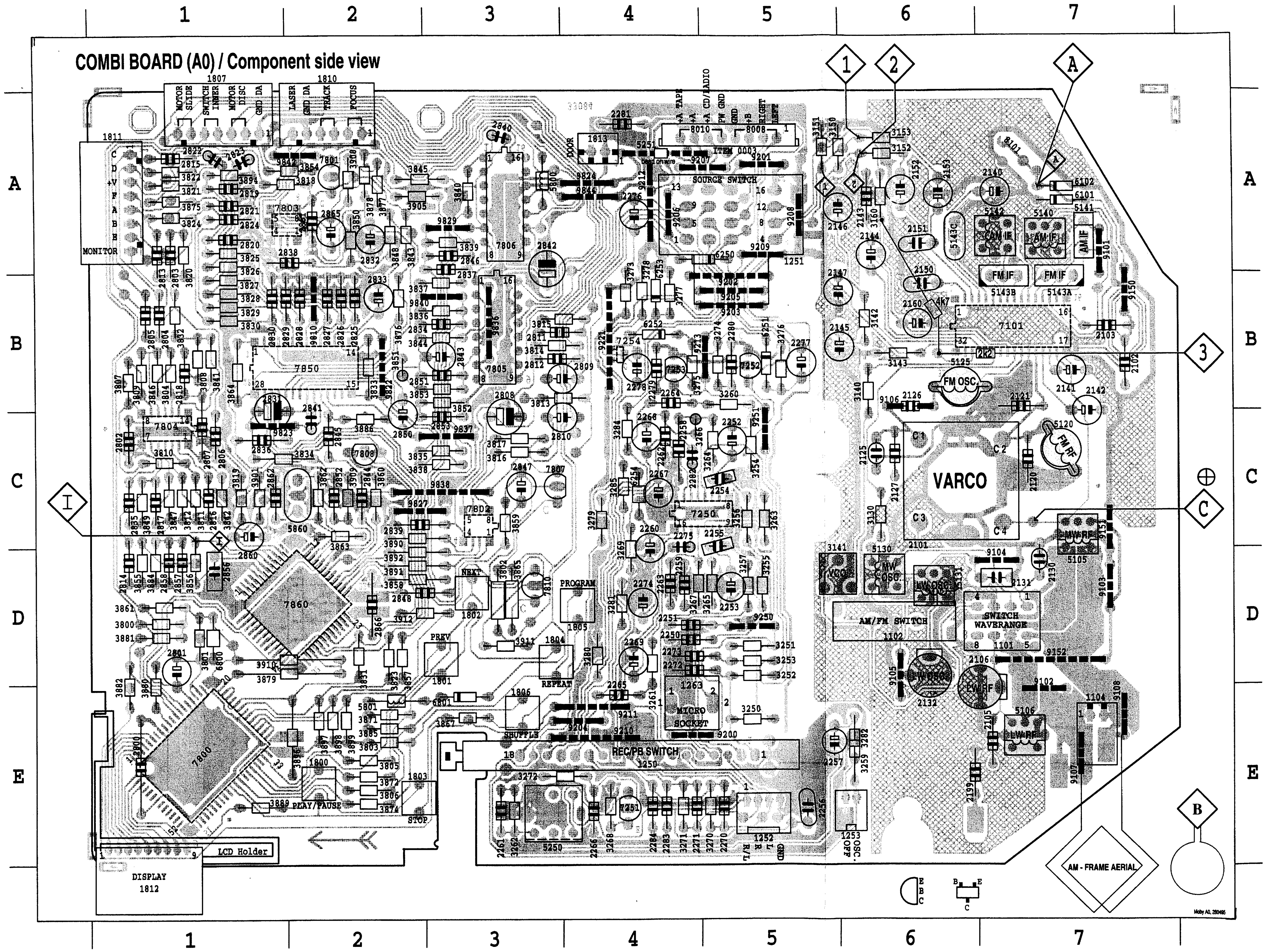
COMBI BOARD

RECORDER/SOURCE SELECTOR PART


REC/PB-AMPLIFIER
SOURCE SELECTOR
REC/PB-Amplifier RIGHT
REC/PB-Amplifier LEFT
7250 AN7318S
BIAS OSCILLATOR
Bias:65kHz
65Vpp
TAPE TRANSPORT
Microphone socket
1263
SOURCE SWITCH
from CD part
from Tuner part
Rec right
Rec left
T257 CD-sync to 3882 Control/CD part
+Radio } to Tuner part (Combi board) (Voltage Multiplier part for sets with digital tuner)
+CD } to Control/CD part(Combiboard)
Mute right
Mute left
7251 BC548B
7252 BC548C
7253 BC548C
7254 BC848C
LEFT
RIGHT
+B
GND
PW-GND
+A_CD/RADIO
+A
+A_TAPE
8008
8010
to/from Feature/ Ampl.Board 1256
Rec/Pb-Switch
1250
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Rec Pb
CD TAPE RADIO
w....only foreseen
x....for REMOTE CONTROL
DC voltages measured with mains supply
.... V Radio FM mode
V Tape mode
V CD mode
20.04.95

1250	C 3
1250	G 3
1250	E 2
1250	G 6
1250	C 6
1250	D 4
1251	G 9
1251	B 9
1251	D 9
1251	F 9
1252	D 1
1253	D 6
1263	H 1
2250	C 3
2251	G 3
2252	A 3
2253	H 3
2254	C 4
2255	G 3
2256	E 4
2257	D 5
2258	B 4
2259	H 4
2260	H 4
2261	E 5
2262	C 5
2263	G 5
2264	A 6
2265	H 6
2266	F 6
2267	C 4
2268	C 5
2269	G 5
2270	C 7
2271	F 7
2272	C 2
2273	G 2
2274	F 4
2275	G 5
2276	C10
2277	D10
2278	E10
2279	E12
2280	D12
2281	F12
2282	B 5
2283	G 7
2284	C 7
3250	B 2
3251	G 2
3252	B 2
3253	H 2
3254	A 3
3255	I 3
3256	C 3
3257	G 3
3259	D 5
3260	A 6
3261	H 6
3262	E 5
3263	B 4
3264	B 4
3265	H 4
3266	B 5
3267	H 5
3268	F 6
3269	C 4
3270	C 6
3271	F 6
3272	E 5
3273	D10
3274	C11
3275	E11
3276	D10
3277	E10
3278	E 9
3279	D 9
3280	C 7
3281	G 7
3282	D 5
3284	B 7
3285	G 7
5250	D 4
6250	C11
6251	D11
6252	E11
6253	E10
6254	G 4
7250	C 4
7250	G 4
7251	E 6
7252	C12
7253	E12
7254	D 9
8008	E14
8040	I 1
9250	H 2
9251	H 9

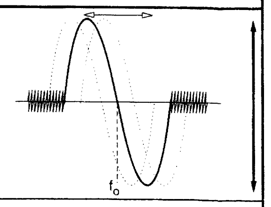
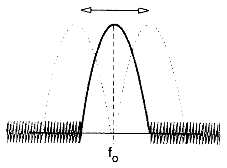
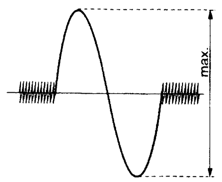
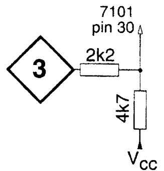
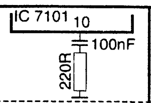
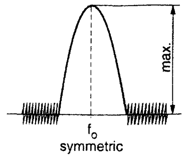
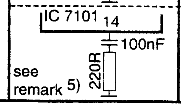
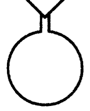
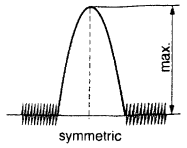
Adjustment of tape speed: *(use Universal Test Cassette SBC420)*
Measure on headphone socket and adjust potmeter on motor to 3150Hz ±1%.


COMBI BOARD (A0) / Component side view
1
2
3
4
5
6
7
A
B
C
D
E
MONITOR
MOTOR SLIDE
SWITCH INNER
MOTOR DISC
GND DA
LASER
GND DA
TRACK
FOCUS
DOOR
SOURCE SWITCH
ITEM 0003
+A TAPE
+A CD/RADIO
PW GND
RIGHT
LEFT
VARCO
FM OSC
FM IF
AM IF
CAM IF
MW OSC
MW RF
LW RF
AM/FM SWITCH
SWITCH WAVERANGE
NEXT
PREV
PROGRAM
REPEAT
SHUFFLE
PLAY/PAUSE
STOP
REC/PB SWITCH
MICRO SOCKET
LCD Holder
DISPLAY 1812
AM - FRAME AERIAL
Moby A0, 280495

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

1101 D 7	1250 E 4	3278 B 4	2819 A 1	3825 A 1	3905 A 2
1102 D 6	1251 A 5	3279 C 4	2820 A 1	3826 A 1	3909 C 2
1104 E 7	1252 E 5	3280 D 4	2821 A 1	3827 B 1	3910 D 2
2101 C 6	1253 E 6	3281 D 4	2822 A 1	3828 B 1	3911 D 3
2102 B 7	1263 E 4	3282 E 6	2823 A 1	3829 B 1	3912 D 2
2103 B 7	2250 D 4	3284 C 4	2824 A 1	3830 B 1	5800 A 3
2105 E 7	2251 D 4	3285 C 4	2825 B 2	3831 D 2	5801 E 2
2106 E 7	2252 C 5	5250 E 3	2826 B 2	3832 B 1	5860 C 2
2120 C 7	2253 D 5	6250 A 5	2827 B 2	3833 B 2	6800 D 1
2121 B 7	2254 C 5	6251 B 5	2828 B 2	3834 C 1	6801 E 3
2125 C 6	2255 C 5	6252 B 4	2829 B 1	3835 C 3	7801 A 2
2126 B 6	2256 E 5	6253 B 4	2830 B 1	3836 B 3	7805 B 3
2127 C 6	2257 E 5	6254 C 4	2831 C 1	3837 B 3	7806 A 3
2130 D 7	2258 C 4	7251 E 4	2832 A 2	3838 C 3	7807 C 3
2131 D 7	2259 D 4	7252 B 5	2833 B 2	3839 A 3	7808 C 2
2132 D 6	2260 D 4	7253 B 4	2834 B 3	3840 A 3	7810 D 3
2140 A 7	2261 E 3	8008 A 5	2835 C 1	3841 B 1	9810 B 2
2141 B 7	2262 C 4	9200 E 4	2836 C 1	3842 C 1	9822 B 2
2142 C 7	2263 D 4	9201 A 5	2837 A 3	3843 A 2	9823 C 1
2143 A 6	2264 B 4	9202 B 5	2838 A 2	3844 B 3	9824 A 4
2144 A 6	2265 E 4	9203 B 5	2839 C 2	3845 A 2	9827 C 2
2145 B 5	2266 E 4	9204 E 4	2840 A 3	3846 B 1	9829 A 3
2146 A 5	2267 C 4	9205 B 5	2841 C 2	3847 C 1	9836 B 3
2147 B 5	2268 C 4	9206 A 4	2842 A 3	3848 A 2	9837 C 3
2150 B 6	2269 D 4	9207 A 5	2843 B 3	3849 C 1	9838 C 3
2151 A 6	2270 E 5	9208 A 5	2844 C 2	3850 A 2	9840 B 3
2152 A 6	2271 E 4	9209 A 5	2845 C 2	3851 B 2	9842 A 2
2153 A 6	2272 D 4	9210 E 4	2846 A 3	3852 B 3	9844 A 4
2160 B 6	2273 D 4	9211 E 4	2847 C 3	3853 B 3	
2199 E 6	2274 D 4	9212 A 4	2848 D 2	3854 A 2	
3130 C 6	2275 C 4	9213 B 5	2850 C 2	3855 D 1	
3140 B 6	2276 A 4	9220 A 4	2851 B 3	3856 D 1	
3141 D 5	2277 B 5	9221 B 4	2852 C 2	3857 D 2	
3142 B 6	2278 B 4	9250 D 5	2853 C 3	3858 D 2	
3143 B 6	2279 B 4	9251 C 5	2856 D 1	3859 C 3	
3150 A 6	2280 B 5	----	2857 D 1	3860 C 2	
3151 A 5	2281 A 4	1800 E 2	2858 D 1	3861 D 1	
3152 A 6	2282 C 4	1801 D 3	2860 C 1	3862 C 2	
3153 A 6	2283 E 4	1802 D 3	2861 A 2	3863 C 2	
3160 A 6	2284 E 4	1803 E 2	2862 C 1	3864 B 1	
5105 C 7	3250 E 5	1804 D 3	2865 A 2	3865 D 3	
5106 E 7	3251 D 5	1805 D 4	2866 D 2	3867 E 3	
5120 C 7	3252 D 5	1806 E 3	3800 D 1	3871 E 2	
5125 B 6	3253 D 5	1807 A 1	3801 D 1	3872 E 2	
5130 D 6	3254 C 5	1810 A 2	3802 D 3	3874 E 2	
5131 D 6	3255 D 5	1811 A 1	3803 E 2	3875 A 1	
5140 A 7	3256 C 5	1812 E 1	3804 B 1	3876 B 2	
5141 A 7	3257 D 5	1813 A 4	3805 E 2	3877 A 2	
5142 A 7	3259 E 6	2800 E 1	3806 E 2	3878 A 2	
5143A B 7	3260 B 5	2801 D 1	3807 B 1	3879 D 2	
5143B B 7	3261 D 4	2802 C 1	3808 B 1	3880 E 1	
5143C A 6	3262 E 3	2803 A 1	3809 B 1	3881 D 1	
6101 A 7	3263 C 5	2804 B 1	3810 C 1	3882 E 1	
6102 A 7	3264 C 5	2805 B 1	3811 C 1	3884 D 1	
8101 A 7	3265 D 5	2806 C 1	3812 C 1	3885 E 2	
9101 A 7	3266 C 4	2807 C 1	3813 B 4	3886 C 2	
9102 E 7	3267 D 4	2808 C 3	3814 B 3	3889 E 1	
9103 D 7	3268 E 4	2809 B 3	3815 B 4	3890 C 2	
9104 D 7	3269 D 4	2810 C 3	3816 C 3	3891 D 2	7101 B 7
9105 D 6	3270 E 5	2811 B 3	3817 C 3	3892 D 2	7250 C 4
9106 B 6	3271 E 4	2812 B 3	3818 A 2	3894 A 1	7254 B 4
9107 E 7	3272 E 4	2813 A 1	3819 C 1	3896 E 2	7800 E 1
9108 E 7	3273 B 4	2814 D 1	3820 A 1	3897 E 2	7802 C 3
9150 B 7	3274 B 5	2815 A 1	3821 A 1	3898 E 2	7803 A 1
9151 C 7	3275 B 4	2816 C 1	3822 A 1	3899 E 2	7804 C 1
9152 D 7	3276 B 5	2817 C 1	3823 D 2	3900 A 2	7850 B 2
----	3277 B 4	2818 B 1	3824 A 1	3901 C 1	7860 D 1

TUNER ADJUSTMENT TABLE

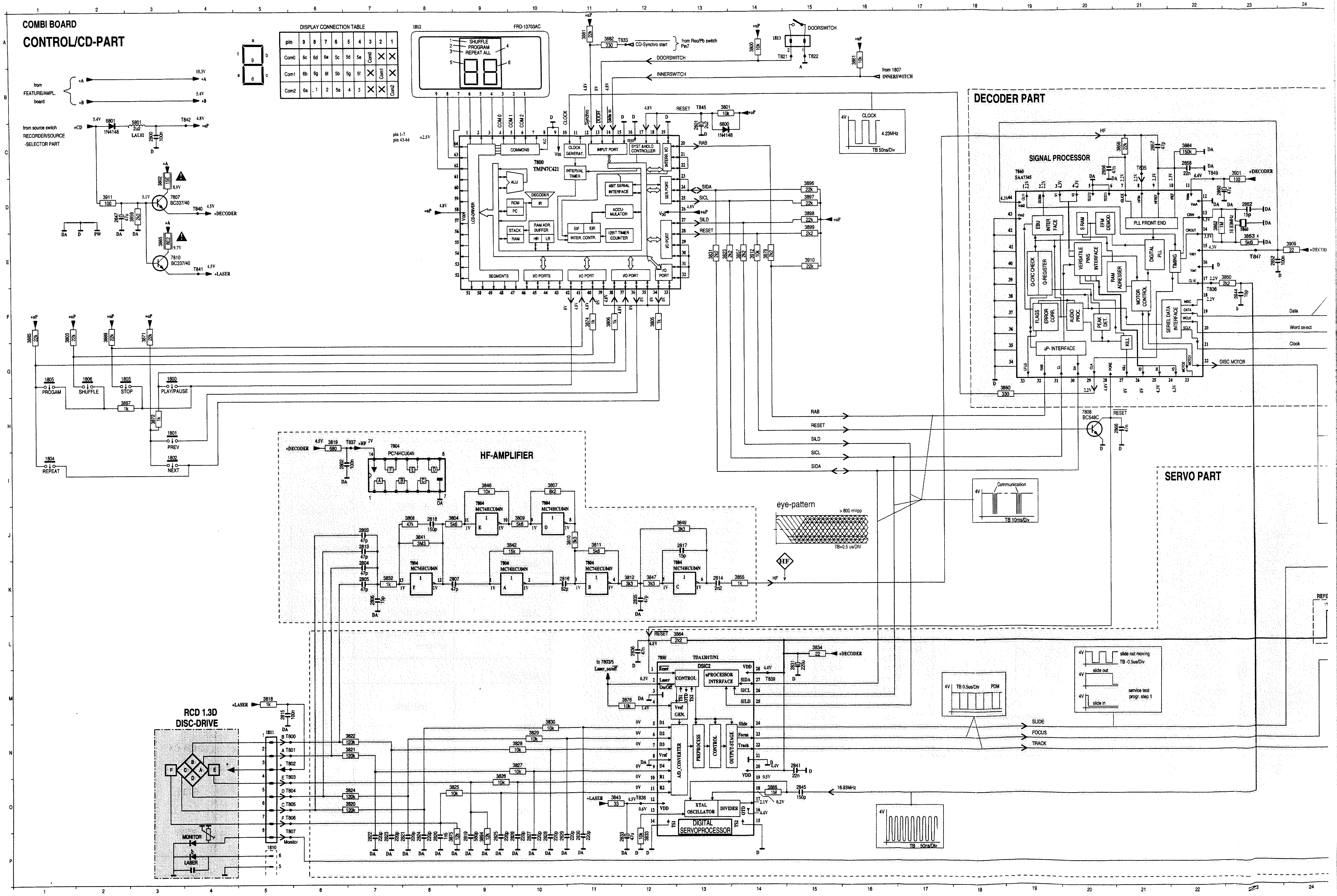
Waverange	Input Frequency	Input	Set tuned to	Adjust	Measure on	Scope / Counter
OSCILLATOR						
FM 87,5 - 108 MHz (65 - 108 MHz) [1] [76 - 108 MHz] [2]	87,35 MHz (64,7 MHz) [75,7 MHz]	A Δf = ±500kHz V_{RF} = 100µV	lower band end	5125	1 or 2	
	108,25 MHz		upper band end	2101 C1		
MW 525 - 1607 kHz (530 - 1710 kHz) [3]	512 kHz (520 kHz)	C Δf = ±30kHz V_{RF} = 100µV	lower band end	5130	1 or 2	
	1635 kHz (1730 kHz)		upper band end	2101 C3		
LW [4] 148,5 - 284 kHz	147 kHz		lower band end	5131		
	291 kHz		upper band end	2132		
FM - RF						
FM 87,5 - 108 MHz (65 - 108 MHz) [1] [76 - 108 MHz] [2]	87,5 MHz (65 MHz) [76 MHz]	A Δf = ±500kHz V_{RF} = 10µV	87,5 MHz (65 MHz) [76 MHz]	5120	1 or 2	
	108 MHz		108 MHz	2101 C2		
VCO						
FM	98 MHz	A continuous wave V_{RF} = 1 mV	98 MHz	3141	3 	152 ±1 kHz
AM - IF						
AM	468 kHz connect pin 24 of IC 7101 (AM Osc) with short wire to ground	C Δf = ±15kHz V_{RF} = 10mV		5140	1 or 2	
			 see remark 5)	5142		
AM -RF						
MW	560 kHz	B  Δf = ±30kHz V_{RF} as low as possible	560 kHz	5105	1 or 2	
	1500 kHz		1500 kHz	2101 C4		
LW [4]	170 kHz		170 kHz	5106		
	260 kHz		260 kHz	2106		

Tuner Adj. Moby Analog 5.3.95

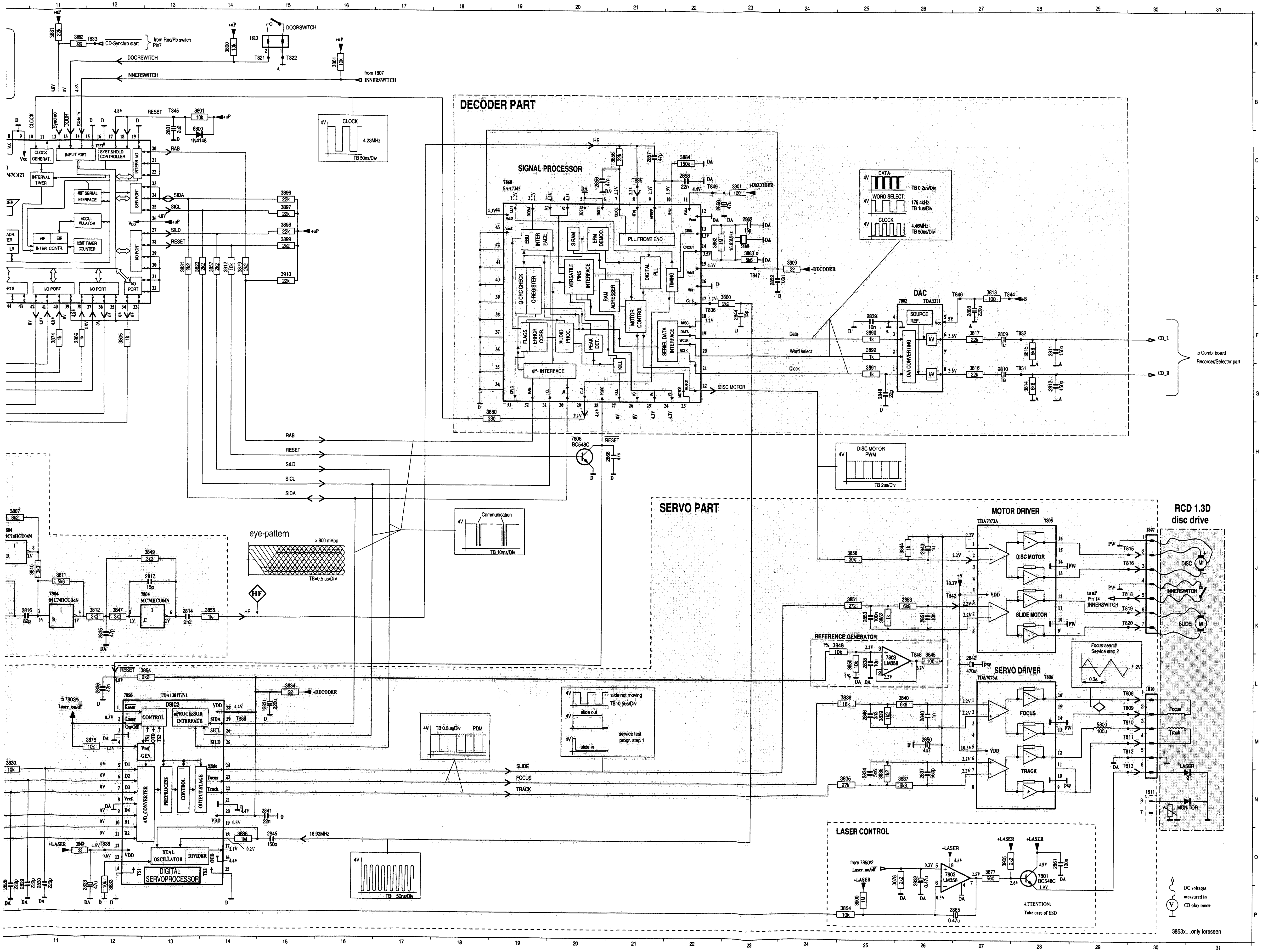
↕ repeat

[1] for East Europe /14 [2] for Japan /06 [3] for USA /17 [4] LW not for all versions

[5] RC-network serves for damping the IF-filter while adjusting the other one.

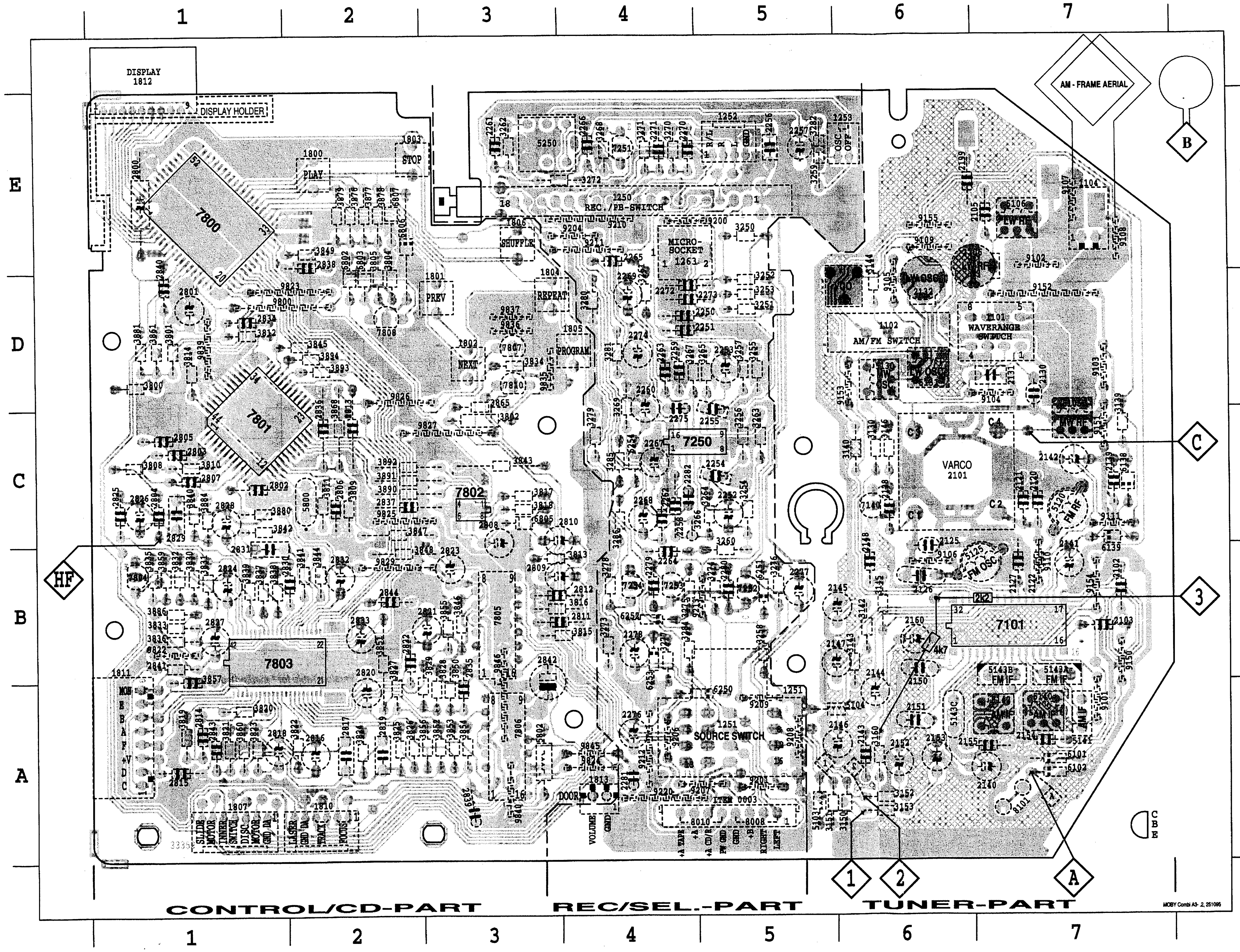

COMBI BOARD
CONTROL/CD-PART
DISPLAY CONNECTION TABLE
from FEATURE/AMPL. board
from source switch RECORDER/SOURCE -SELECTOR PART
FRD-13703AC
SHUFFLE
PROGRAM
REPEAT ALL
7800 TMP47C421
DOORSWITCH
INNERSWITCH
from 1807 INNERSWITCH
CD-Synchro start
from Rec/Pb switch Pin7
CLOCK 4.23MHz TB 50ns/Div
DECODER PART
SIGNAL PROCESSOR
7860 SAA7345
PLL FRONT END
+DECODER
+LASER
1805 PROGAM
1806 SHUFFLE
1803 STOP
1800 PLAY/PAUSE
1801 PREV
1802 NEXT
1804 REPEAT
HF-AMPLIFIER
7804 PC74HCU04N
7804 MC74HCU04N
eye-pattern
> 800 mVpp
TB=0,5 us/DIV
Communication TB 10ms/Div
SERVO PART
RAB
RESET
SILD
SICL
SIDA
Data
Word select
Clock
DISC MOTOR
7808 BC548C
RCD 1.3D DISC-DRIVE
MONITOR
LASER
7850 TDA1301T/N1 DSIC2
CONTROL
µPROCESSOR INTERFACE
AD_CONVERTER
PREPROCESS
CONTROL
OUTPUT-STAGE
XTAL OSCILLATOR
DIVIDER
DIGITAL SERVOPROCESSOR
SLIDE
FOCUS
TRACK
16.93MHz
TB 0.5us/Div PDM
slide not moving TB -0.5us/Div
slide out
slide in
service test progr. step 1
TB 50ns/Div
to 7803/5 Laser_on/off
REFE

6 - 5


DECODER PART
SIGNAL PROCESSOR
7860
SAA7345
DAC
7802 TDA1311
SERVO PART
MOTOR DRIVER
TDA7073A 7805
SERVO DRIVER
TDA7073A 7806
RCD 1.3D
disc drive
REFERENCE GENERATOR
LASER CONTROL
7850 TDA1301T/N3
DSIC2
DIGITAL SERVOPROCESSOR
eye-pattern
CD_L
CD_R
to Combi board
Recorder/Selector part
DISC MOTOR
SLIDE MOTOR
FOCUS
TRACK
DOORSWITCH
INNERSWITCH
CLOCK
4.23MHz
16.93MHz
DISC MOTOR PWM
ATTENTION:
Take care of ESD
DC voltages measured in CD play mode
3863x...only foreseen

1800	G 3
1801	H 3
1802	I 3
1803	G 2
1804	I 1
1805	G 1
1806	G 2
1807	I30
1810	L30
1811	N 5
1812	A 8
1813	A14
2800	C 3
2801	C13
2802	I 6
2803	J 7
2804	K 7
2805	K 7
2806	K 7
2807	K 8
2808	F27
2809	F27
2810	G27
2811	F28
2812	G28
2813	J 7
2814	K13
2815	M 5
2816	K10
2817	J13
2818	J 8
2819	P 8
2820	P 8
2821	P 8
2822	P 7
2823	P 7
2824	P 8
2825	P 9
2826	P10
2827	P10
2828	P10
2829	P10
2830	P11
2831	L15
2832	O26
2833	P12
2834	N25
2835	K12
2836	L12
2837	N26
2838	L25
2839	F25
2840	M26
2841	N15
2842	N27
2843	J26
2844	F23
2845	O15
2846	M25
2847	E 2
2848	G25
2850	M26
2851	K26
2852	E23
2853	K25
2856	C20
2857	C21
2858	C22
2860	D22
2861	O28
2862	D23
2865	P27
2866	H20
3800	A14
3801	B13
3802	D 3
3803	F 1
3804	J 8
3805	F12
3806	F11
3807	I10
3808	J 8
3809	J10
3810	J11
3811	J11
3812	K12
3813	E27
3814	G28
3815	F28
3816	G27
3817	F27
3818	M 5
3819	H 6
3820	O 7
3821	N 7
3822	N 7
3823	E13
3824	O 7
3825	O 9
3826	O 9
3827	N10
3828	N10
3829	N10
3830	N10
3831	E13
3832	K 7
3833	P12
3834	L15
3835	N25
3836	N25
3837	N26
3838	L25
3839	M25
3840	L26
3841	J 8
3842	J10
3843	O11
3844	J26
3845	L26
3846	I 9
3847	K12
3848	K25
3849	J13
3850	L25
3851	K25
3852	K25
3853	K26
3854	P25
3855	K14
3856	C21
3857	E14
3858	J25
3859	E 2
3860	E23
3861	A16
3862	D22
3863	E23
3864	L14
3865	E 3
3867	H 2
3871	F 3
3872	H 3
3874	F11
3875	P 9
3876	M12
3877	O27
3878	O26
3879	E14
3880	G19
3881	A11
3882	A11
3884	C22
3885	F 1
3886	O14
3889	F 2
3890	F25
3891	G25
3892	F25
3894	P 9
3896	D15
3897	D15
3898	D15
3899	D15
3900	P25
3901	D23
3905	O27
3909	E24
3910	E15
3911	D 2
3912	E14
5800	M29
5801	C 3
5860	E23
6800	C13
6801	B 2
7800	C10
7801	O28
7802	E26
7803	L25
7803	O26
7804	K 9
7804	K11
7804	K12
7804	J10
7804	J 9
7804	K 8
7805	I28
7806	L28
7807	D 3
7808	H14
7810	E 3
7850	L12
7860	C19
T800	N 5
T801	N 5
T802	N 5
T803	N 5
T804	O 5
T805	O 5
T806	O 5
T807	O 5
T808	L30
T809	L30
T810	M30
T811	M30
T812	M30
T813	M30
T815	J30
T816	J30
T818	J30
T819	K30
T820	K30
T821	A15
T822	A15
T831	G28
T832	F28
T833	A12
T835	C21
T836	F22
T837	H 7
T838	O12
T839	M14
T840	D 3
T841	E 3
T842	B 3
T843	K26
T844	E27
T845	B13
T846	E27
T847	E23
T848	L26
T849	C22

COMBI BOARD (A3 -) / Copperside view

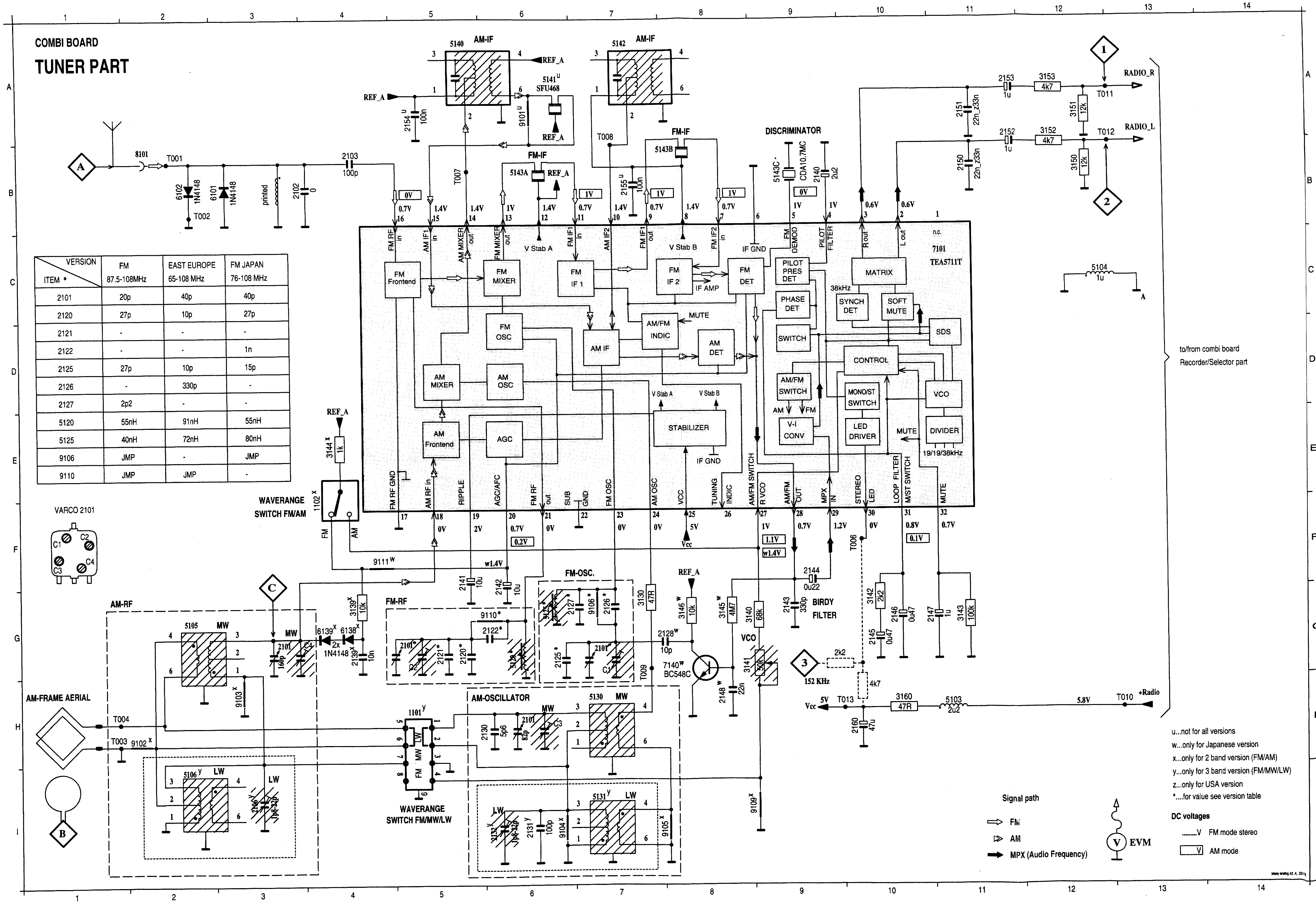

1
2
3
4
5
6
7
E
D
C
B
A
DISPLAY
1812
DISPLAY HOLDER
AM - FRAME AERIAL
B
C
HF
3
1
2
A
7800
7801
7802
7803
7250
7101
VARCO
2101
AM/FM SWITCH
WAVERANGE SWITCH
MICRO-SOCKET
1263
REC./PB-SWITCH
SOURCE SWITCH
PLAY
STOP
SHUFFLE
REPEAT
PREV
NEXT
PROGRAM
DOOR
VOLUME
FM RF
FM OSC
AM OSC
FM IF
AM IF
CONTROL/CD-PART
REC/SEL.-PART
TUNER-PART
MOBY Combi A3- 2, 251095

CONTROL/CD-PART		
1800	E	2
1801	D	3
1802	D	3
1803	E	2
1804	D	3
1805	D	4
1806	E	3
1807	A	1
1810	A	2
1811	A	1
1812	E	1
1813	A	4
2800	E	1
2801	D	1
2802	C	1
2803	C	1
2804	C	1
2805	C	1
2806	C	2
2807	C	1
2808	C	3
2809	B	3
2810	C	3
2811	B	3
2812	B	3
2813	C	2
2814	A	1
2815	A	1
2816	A	2
2817	A	2
2818	A	1
2819	A	2
2820	A	2
2821	B	3
2822	B	2
2823	B	3
2824	B	1
2825	C	1
2826	C	1
2827	B	1
2828	C	1
2829	C	1
2830	B	2
2831	B	1
2832	B	2
2833	B	2
2834	D	1
2835	A	3
2836	C	2
2837	C	2
2838	E	2
2839	A	3
2840	D	1
2841	B	1
2842	A	3
2843	A	1
2844	B	2
3800	D	1
3801	D	1
3802	C	3
3804	D	2
3805	D	2
3808	C	1
3809	C	2
3810	C	1
3811	C	2
3812	D	1
3813	B	3
3814	D	1
3815	B	4
3816	B	3
3817	C	3
3818	C	3
3819	A	1
3820	A	1
3821	A	1
3822	A	2
3823	A	1
3824	A	2
3825	A	2
3826	A	2
3827	A	2
3828	A	3
3829	A	2
3830	B	1
3831	B	1
3832	B	1
3833	B	1
3834	D	3
3835	B	1
3836	B	1
3837	B	1
3838	B	1
3839	B	1
3840	C	1
3841	B	2
3842	C	1
3843	C	3
3844	B	2
3845	D	2
3846	B	3
3847	C	2
3848	B	2
3849	E	2
3850	A	3
3851	B	2
3852	A	3
3853	A	3
3854	A	3
3855	B	3
3856	A	3
3857	B	1
3859	B	1
3860	A	1
3861	D	1
3865	D	3
3868	C	2
3876	E	2
3877	E	2
3878	E	2
3879	E	2
3880	C	1
3881	D	1
3884	C	1
3886	B	1
3890	C	2
3891	C	2
3892	C	2
3893	D	2
3894	D	2
5800	C	2
5802	A	3
6802	D	2
6803	D	2
6805	C	3
6806	E	2
6807	E	2
7804	B	1
7805	B	3
7806	A	3
7807	D	3
7808	D	2
7810	D	3
9800	D	1
9822	B	1
9823	D	2
9824	A	4
9825	C	2
9826	D	2
9827	C	3
9829	B	2
9835	D	3
9836	D	3
9837	D	3
9839	D	1
9840	A	3
9845	A	4
9846	A	3
REC/SEL. PART		
1250	E	4
1251	A	5
1252	E	5
1253	E	6
1263	E	4
2250	D	4
2251	D	4
2252	C	5
2253	D	5
2254	C	5
2255	C	5
2256	E	5
2257	E	5
2258	C	4
2259	D	4
2260	D	4
2261	E	3
2262	C	4
2263	D	4
2264	B	4
2265	E	4
2266	E	4
2267	C	4
2268	C	4
2269	D	4
2270	E	4
2271	E	4
2272	D	4
2273	D	4
2274	D	4
2275	C	4
2276	A	4
2277	B	5
2278	B	4
2279	B	4
2280	B	5
2281	A	4
2282	C	4
3250	E	5
3251	D	5
3252	D	5
3253	D	5
3254	C	5
3255	D	5
3256	C	5
3257	D	5
3258	B	5
3259	E	5
3260	B	5
3261	D	4
3262	E	3
3263	C	5
3264	C	5
3265	D	5
3266	C	4
3267	D	4
3268	E	4
3269	D	4
3270	E	4
3271	E	4
3272	E	4
3273	B	4
3274	B	5
3275	B	4
3276	B	5
3277	B	4
3278	B	4
3279	C	4
3280	D	4
3281	D	4
3282	E	5
3284	B	4
3285	C	4
3286	C	4
5250	E	3
6250	A	5
6251	B	5
6252	B	4
6253	B	4
6254	C	4
7251	E	4
7252	B	5
7253	B	4
7254	B	4
8008	A	5
9200	E	4
9201	A	5
9204	E	4
9206	A	4
9207	A	5
9208	A	5
9209	A	5
9210	E	4
9211	E	4
9212	A	4
9213	B	5
9220	A	4
TUNER PART		
1101	D	7
1102	D	6
1104	E	7
2101	C	6
2102	B	7
2103	B	7
2105	E	7
2106	E	7
2120	C	7
2121	C	7
2122	B	7
2125	B	6
2126	B	6
2127	B	7
2128	C	6
2130	D	7
2131	D	7
2132	D	6
2139	C	7
2140	A	7
2141	B	7
2142	C	7
2143	A	6
2144	A	6
2145	B	5
2146	A	5
2147	B	5
2148	B	6
2150	B	6
2151	A	6
2152	A	6
2153	A	6
2154	A	7
2155	A	7
2160	B	6
2199	E	6
3130	C	6
3139	C	7
3140	C	6
3141	D	6
3142	B	6
3143	B	6
3144	D	6
3145	B	6
3146	C	6
3150	A	6
3151	A	5
3152	A	6
3153	A	6
3160	A	6
5103	A	5
5104	A	5
5105	C	7
5106	E	7
5120	C	7
5125	B	7
5130	D	6
5131	D	6
5140	A	7
5141	A	7
5142	A	7
5143A	B	7
5143B	B	7
5143C	A	6
6101	A	7
6102	A	7
6138	C	7
6139	C	7
7140	C	6
8101	A	7
9101	A	7
9102	E	7
9103	D	7
9104	D	7
9105	D	6
9106	B	6
9107	E	7
9108	E	7
9109	E	6
9110	B	7
9111	C	7
9150	B	7
9151	C	7
9152	D	7
9153	D	6
9154	B	7
9155	E	6
7101	B	7
7250	C	4
7800	E	1
7801	C	1
7802	C	3
7803	B	1

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

COMBI BOARD

TUNER PART



AM-IF
5140
5142
REF_A
5141 u
SFU468
9101 u
2154 u 100n
FM-IF
5143A
5143B
5143C
T007
T008
2155 u 100n
DISCRIMINATOR
CDA10.7MC
2140 2u2
8101
T001
T002
6102 1N4148
6101 1N4148
printed
2102 0
2103 100p
7101
TEA5711T
FM Frontend
FM MIXER
FM IF 1
FM IF 2
IF AMP
FM DET
PILOT PRES DET
PHASE DET
SWITCH
MATRIX
38kHz
SYNCH DET
SOFT MUTE
SDS
CONTROL
FM OSC
AM IF
AM/FM INDIC
MUTE
AM DET
AM MIXER
AM OSC
AM/FM SWITCH
V-I CONV
MONO/ST SWITCH
LED DRIVER
VCO
DIVIDER
19/19/38kHz
AM Frontend
AGC
STABILIZER
V Stab A
V Stab B
IF GND
VCC
2153 1u
3153 4k7
2151 22n_233n
3151 12k
T011
RADIO_R
2152 1u
3152 4k7
T012
RADIO_L
2150 22n_233n
3150 12k
5104 1u
to/from combi board
Recorder/Selector part
WAVERANGE SWITCH FM/AM
1102 x
3144 x 1k
VARCO 2101
C1 C2 C3 C4
AM-RF
5105 MW
6139 x 6138 x
2x 1N4148
2139 x 10n
3139 x 10k
9111 w
FM-RF
9110*
2122*
2121*
2120*
FM-OSC.
2127*
9106*
2126*
2125*
2141 10u
2142 10u
3130 47R
2128 w 10p
7140 w BC548C
3146 w 10k
3145 w 4M7
3140 68k
3141 10k
VCO
2143 330p
2144 0u22
BIRDY FILTER
2148 w 22n
T006
3142 2k2
2145 0u47
2146 0u47
2147 1u
3143 100k
152 KHz
2k2
4k7
T013
Vcc
5V
3160 47R
5103 2u2
5.8V
T010
+Radio
2160 47u
AM-FRAME AERIAL
T004
T003
9102 x
9103 x
5106 y LW
2106 y
1101 y
WAVERANGE SWITCH FM/MW/LW
AM-OSCILLATOR
5130 MW
2130 5p6
5131 y LW
2132 y
2131 y 100p
9104 x
9105 x
9109 x
T009
Moby analog A3 .4, 23119

VERSION / ITEM *	FM 87.5-108MHz	EAST EUROPE 65-108 MHz	FM JAPAN 76-108 MHz
2101	20p	40p	40p
2120	27p	10p	27p
2121	-	-	-
2122	-	-	1n
2125	27p	10p	15p
2126	-	330p	-
2127	2p2	-	-
5120	55nH	91nH	55nH
5125	40nH	72nH	80nH
9106	JMP	-	JMP
9110	JMP	JMP	-

Signal path

⇨ FM

⊳ AM

➡ MPX (Audio Frequency)

EVM

u...not for all versions

w...only for Japanese version

x...only for 2 band version (FM/AM)

y...only for 3 band version (FM/MW/LW)

z...only for USA version

*....for value see version table

DC voltages

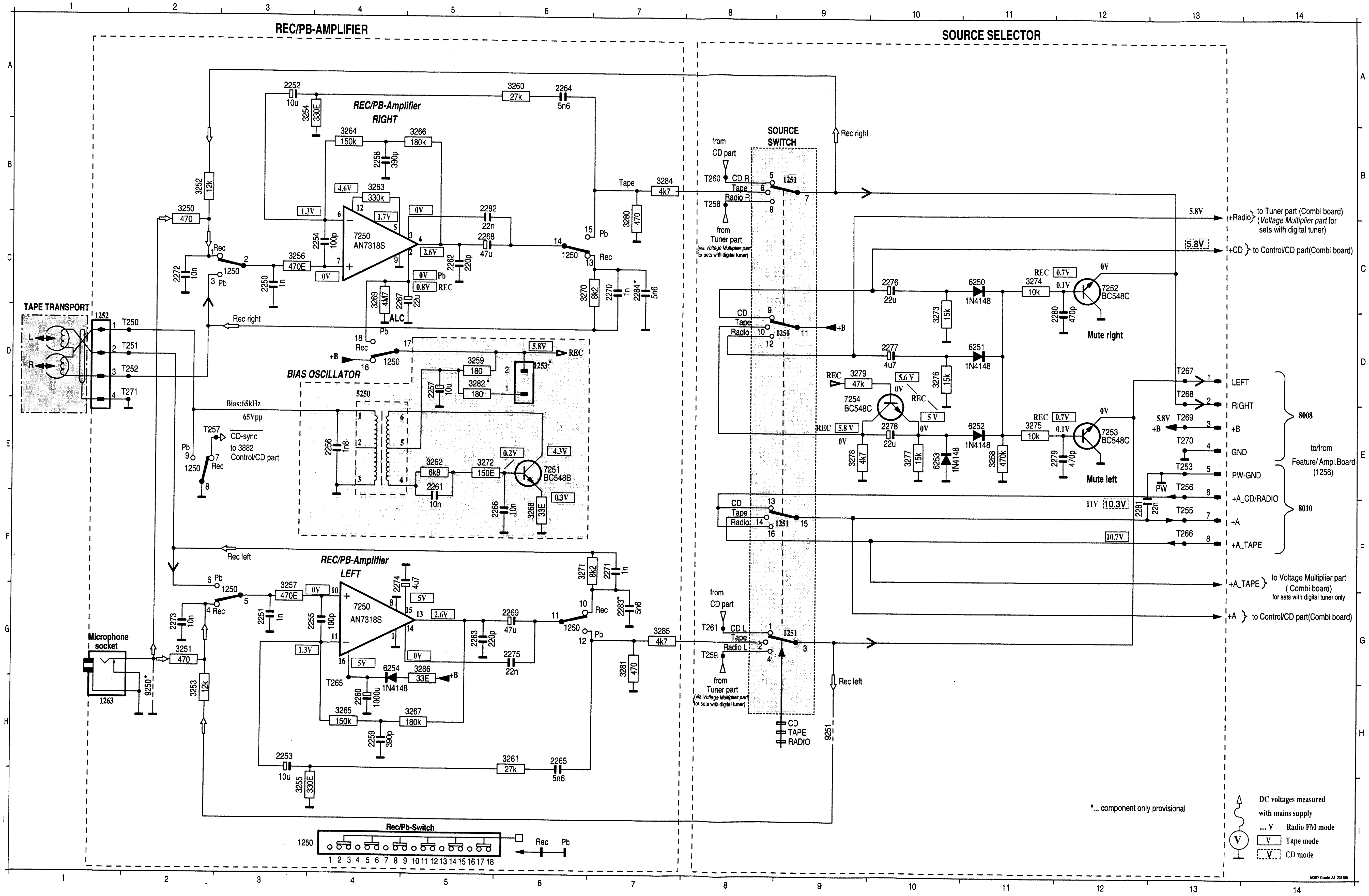
.........V FM mode stereo

☐V AM mode

1101	H 5
1102	F 4
1104	H 1
2101	G 7
2101	H 6
2101	G 3
2101	G 5
2102	B 3
2103	B 4
2106	I 3
2120	G 5
2121	G 5
2122	G 6
2125	G 6
2126	G 7
2127	G 6
2128	G 8
2130	H 6
2131	I 6
2132	I 6
2139	G4
2140	B 9
2141	F 5
2142	F 6
2143	G 9
2144	F 9
2145	G10
2146	G10
2147	G10
2148	H 8
2150	B11
2151	A11
2152	A11
2153	A11
2154	A 5
2155	B 7
2160	H10
3130	G 7
3139	G 4
3140	G 8
3141	G 8
3142	G10
3143	G11
3144	E 4
3145	G 8
3146	G 8
3150	B12
3151	A12
3152	A12
3153	A12
3160	H10
5103	H11
5104	C12
5105	G 2
5106	I 2
5120	G 6
5125	G 6
5130	H 7
5131	I 7
5140	A 5
5141	A 6
5142	A 7
5143A	B 6
5143B	B 8
5143C	B 9
6101	B 2
6102	B 2
6138	G4
6139	G4
7101	C11
7140	G 8
8101	B 2
9101	A 6
9102	H 2
9103	H 3
9104	I 6
9105	I 7
9106	G 7
9109	I 8
9110	G 6
9111	F 4

COMBI BOARD

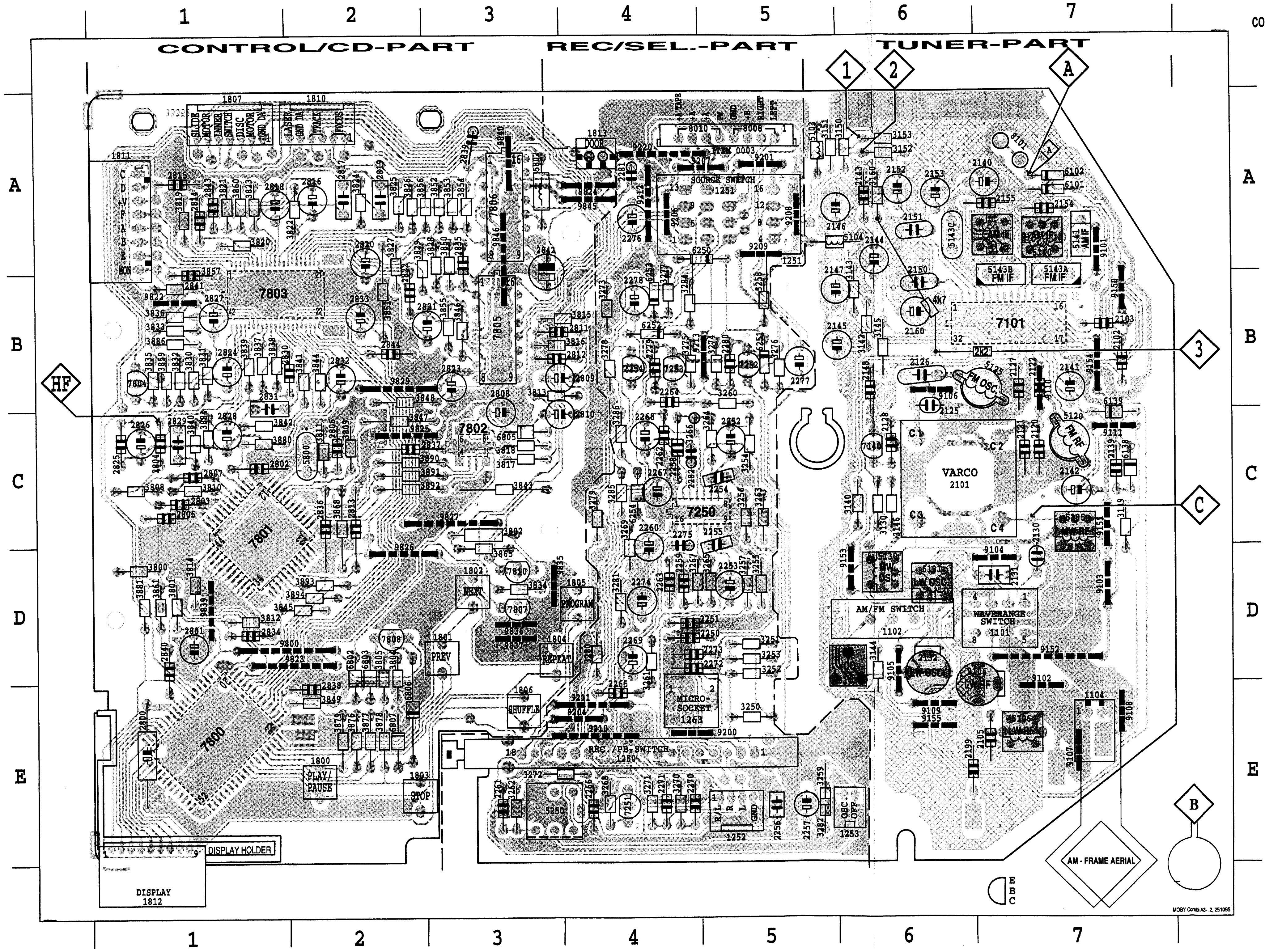
RECORDER/SOURCE SELECTOR PART


REC/PB-AMPLIFIER
SOURCE SELECTOR
REC/PB-Amplifier RIGHT
REC/PB-Amplifier LEFT
7250 AN7318S
BIAS OSCILLATOR
5250
7251 BC548B
Bias:65kHz
65Vpp
TAPE TRANSPORT
1252
Microphone socket
1263
T257 CD-sync to 3882 Control/CD part
SOURCE SWITCH
1251
from CD part
from Tuner part
(via Voltage Multiplier part for sets with digital tuner)
Rec right
Rec left
Mute right
Mute left
7252 BC548C
7253 BC548C
7254 BC548C
+Radio } to Tuner part (Combi board) (Voltage Multiplier part for sets with digital tuner)
+CD } to Control/CD part(Combi board)
LEFT
RIGHT
+B
GND
PW-GND
+A_CD/RADIO
+A
+A_TAPE
8008
8010
to/from Feature/ Ampl.Board (1256)
+A_TAPE } to Voltage Multiplier part (Combi board) for sets with digital tuner only
+A } to Control/CD part(Combi board)
*... component only provisional
DC voltages measured with mains supply
.... V Radio FM mode
V Tape mode
V CD mode
Rec/Pb-Switch
1250
Rec Pb
CD TAPE RADIO
9251

1250	C 3
1250	G 3
1250	E 2
1250	G 6
1250	C 6
1250	D 4
1251	G 9
1251	B 9
1251	D 9
1251	F 9
1252	D 1
1253	D 6
1263	H 1
2250	C 3
2251	G 3
2252	A 3
2253	H 3
2254	C 4
2255	G 3
2256	E 4
2257	D 5
2258	B 4
2259	H 4
2260	H 4
2261	E 5
2262	C 5
2263	G 5
2264	A 6
2265	H 6
2266	F 6
2267	C 4
2268	C 5
2269	G 5
2270	C 7
2271	F 7
2272	C 2
2273	G 2
2274	F 4
2275	G 5
2276	C10
2277	D10
2278	E10
2279	E12
2280	D12
2281	F12
2282	B 5
2283	G 7
2284	C 7
3250	B 2
3251	G 2
3252	B 2
3253	H 2
3254	A 3
3255	I 3
3256	C 3
3257	G 3
3258	E11
3259	D 5
3260	A 6
3261	H 6
3262	E 5
3263	B 4
3264	B 4
3265	H 4
3266	B 5
3267	H 5
3268	F 6
3269	C 4
3270	C 6
3271	F 6
3272	E 5
3273	D10
3274	C11
3275	E11
3276	D10
3277	E10
3278	E 9
3279	D 9
3280	C 7
3281	G 7
3282	D 5
3284	B 7
3285	G 7
3286	G 5
5250	D 4
6250	C11
6251	D11
6252	E11
6253	E10
6254	G 4
7250	C 4
7250	G 4
7251	E 6
7252	C12
7253	E12
7254	D 9
8008	E14
8040	I 1
9250	H 2
9251	H 9

Adjustment of tape speed: *(use Universal Test Cassette SBC420)*
Measure on headphone socket and adjust potmeter on motor to 3150Hz ±1%.

COMBI BOARD (A3 -) / Component side view


1
2
3
4
5
6
7
A
B
C
D
E
CONTROL/CD-PART
REC/SEL.-PART
TUNER-PART
1
2
A
3
C
B
HF
7803
7801
7800
7802
7805
7806
7250
7101
VARCO
2101
C1
C2
C3
C4
SOURCE SWITCH
1251
AM/FM SWITCH
1102
WAVERANGE SWITCH
1101
MICRO-SOCKET
1263
REC./PB-SWITCH
1250
1252
1253
OSC OFF
PLAY/PAUSE
1800
STOP
1803
PREV
1801
NEXT
1802
PROGRAM
1805
REPEAT
1804
SHUFFLE
1806
DOOR
1813
1807
1810
1811
SLIDE MOTOR
INNER SWITCH
DISC MOTOR
GND DA
LASER
GND DA
TRACK
FOCUS
FM OSC
FM RF
FM IF
AM IF
AM OSC
LW OSC
MW OSC
LW RF
MW RF
5143B FM IF
5143A FM IF
4k7
AM - FRAME AERIAL
DISPLAY HOLDER
DISPLAY
1812
E
B
C
MOBY Combi A3- .2, 251095

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

CONTROL/CD-PART

1800	E	2
1801	D	3
1802	D	3
1803	E	2
1804	D	3
1805	D	4
1806	E	3
1807	A	1
1810	A	2
1811	A	1
1812	E	1
1813	A	4
2800	E	1
2801	D	1
2802	C	1
2803	C	1
2804	C	1
2805	C	1
2806	C	2
2807	C	1
2808	C	3
2809	B	3
2810	C	3
2811	B	3
2812	B	3
2813	C	2
2814	A	1
2815	A	1
2816	A	2
2817	A	2
2818	A	1
2819	A	2
2820	A	2
2821	B	3
2822	B	2
2823	B	3
2824	B	1
2825	C	1
2826	C	1
2827	B	1
2828	C	1
2829	C	1
2830	B	2
2831	B	1
2832	B	2
2833	B	2
2834	D	1
2835	A	3
2836	C	2
2837	C	2
2838	E	2
2839	A	3
2840	D	1
2841	B	1
2842	A	3
2843	A	1
2844	B	2
3800	D	1
3801	D	1
3802	C	3
3804	D	2
3805	D	2
3808	C	1
3809	C	2
3810	C	1
3811	C	2
3812	D	1
3813	B	3
3814	D	1
3815	B	4
3816	B	3
3817	C	3
3818	C	3
3819	A	1
3820	A	1
3821	A	1
3822	A	2
3823	A	1
3824	A	2
3825	A	2
3826	A	2
3827	A	2
3828	A	3
3829	A	2
3830	B	1
3831	B	1
3832	B	1
3833	B	1
3834	D	3
3835	B	1
3836	B	1
3837	B	1
3838	B	1
3839	B	1
3840	C	1
3841	B	2
3842	C	1
3843	C	3
3844	B	2
3845	D	2
3846	B	3
3847	C	2
3848	B	2
3849	E	2
3850	A	3
3851	B	2
3852	A	3
3853	A	3
3854	A	3
3855	B	3
3856	A	3
3857	B	1
3859	B	1
3860	A	1
3861	D	1
3865	D	3
3868	C	2
3876	E	2
3877	E	2
3878	E	2
3879	E	2
3880	C	1
3881	D	1
3884	C	1
3886	B	1
3890	C	2
3891	C	2
3892	C	2
3893	D	2
3894	D	2
5800	C	2
5802	A	3
6802	D	2
6803	D	2
6805	C	3
6806	E	2
6807	E	2
7804	B	1
7805	B	3
7806	A	3
7807	D	3
7808	D	2
7810	D	3
9800	D	1
9822	B	1
9823	D	2
9824	A	4
9825	C	2
9826	D	2
9827	C	3
9829	B	2
9835	D	3
9836	D	3
9837	D	3
9839	D	1
9840	A	3
9845	A	4
9846	A	3

REC/SEL. PART

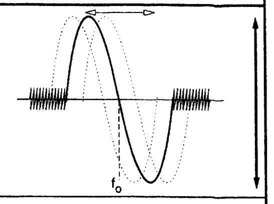
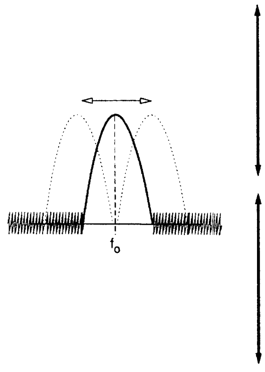
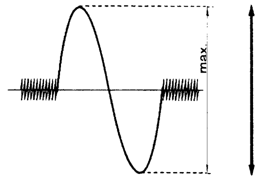
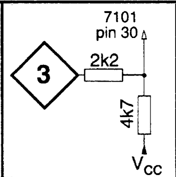
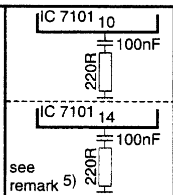
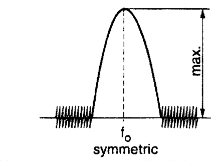
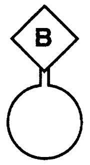
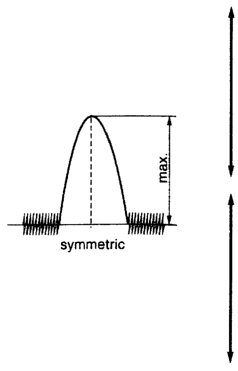
1250	E	4
1251	A	5
1252	E	5
1253	E	6
1263	E	4
2250	D	4
2251	D	4
2252	C	5
2253	D	5
2254	C	5
2255	C	5
2256	E	5
2257	E	5
2258	C	4
2259	D	4
2260	D	4
2261	E	3
2262	C	4
2263	D	4
2264	B	4
2265	E	4
2266	E	4
2267	C	4
2268	C	4
2269	D	4
2270	E	4
2271	E	4
2272	D	4
2273	D	4
2274	D	4
2275	C	4
2276	A	4
2277	B	5
2278	B	4
2279	B	4
2280	B	5
2281	A	4
2282	C	4
3250	E	5
3251	D	5
3252	D	5
3253	D	5
3254	C	5
3255	D	5
3256	C	5
3257	D	5
3258	B	5
3259	E	5
3260	B	5
3261	D	4
3262	E	3
3263	C	5
3264	C	5
3265	D	5
3266	C	4
3267	D	4
3268	E	4
3269	D	4
3270	E	4
3271	E	4
3272	E	4
3273	B	4
3274	B	5
3275	B	4
3276	B	5
3277	B	4
3278	B	4
3279	C	4
3280	D	4
3281	D	4
3282	E	5
3284	B	4
3285	C	4
3286	C	4
5250	E	3
6250	A	5
6251	B	5
6252	B	4
6253	B	4
6254	C	4
7251	E	4
7252	B	5
7253	B	4
7254	B	4
8008	A	5
9200	E	4
9201	A	5
9204	E	4
9206	A	4
9207	A	5
9208	A	5
9209	A	5
9210	E	4
9211	E	4
9212	A	4
9213	B	5
9220	A	4

TUNER PART

1101	D	7
1102	D	6
1104	E	7
2101	C	6
2102	B	7
2103	B	7
2105	E	7
2106	E	7
2120	C	7
2121	C	7
2122	B	7
2125	B	6
2126	B	6
2127	B	7
2128	C	6
2130	D	7
2131	D	7
2132	D	6
2139	C	7
2140	A	7
2141	B	7
2142	C	7
2143	A	6
2144	A	6
2145	B	5
2146	A	5
2147	B	5
2148	B	6
2150	B	6
2151	A	6
2152	A	6
2153	A	6
2154	A	7
2155	A	7
2160	B	6
2199	E	6
3130	C	6
3139	C	7
3140	C	6
3141	D	6
3142	B	6
3143	B	6
3144	D	6
3145	B	6
3146	C	6
3150	A	6
3151	A	5
3152	A	6
3153	A	6
3160	A	6
5103	A	5
5104	A	5
5105	C	7
5106	E	7
5120	C	7
5125	B	7
5130	D	6
5131	D	6
5140	A	7
5141	A	7
5142	A	7
5143A	B	7
5143B	B	7
5143C	A	6
6101	A	7
6102	A	7
6138	C	7
6139	C	7
7140	C	6
8101	A	7
9101	A	7
9102	E	7
9103	D	7
9104	D	7
9105	D	6
9106	B	6
9107	E	7
9108	E	7
9109	E	6
9110	B	7
9111	C	7
9150	B	7
9151	C	7
9152	D	7
9153	D	6
9154	B	7
9155	E	6

7101	B	7
7250	C	4
7800	E	1
7801	C	1
7802	C	3
7803	B	1

TUNER ADJUSTMENT TABLE

Waverange	Input Frequency	Input	Set tuned to	Adjust	Measure on	Scope / Counter
OSCILLATOR						
FM 87,5 - 108 MHz (65 - 108 MHz) 1) [76 - 108 MHz] 2)	87,35 MHz (64,7 MHz) [75,7 MHz]	A Δf = ±500kHz V_{RF} = 100μV	lower band end	5125	1 or 2	
	108,25 MHz		upper band end	2101 C1		
MW 525 - 1607 kHz (530 - 1710 kHz) 3)	512 kHz (520 kHz)	C Δf = ±30kHz V_{RF} = 100μV	lower band end	5130	1 or 2	
	1635 kHz (1730 kHz)		upper band end	2101 C3		
LW 4) 148,5 - 284 kHz	147 kHz		lower band end	5131		
	291 kHz		upper band end	2132		
FM - RF						
FM 87,5 - 108 MHz (65 - 108 MHz) 1) [76 - 108 MHz] 2)	87,5 MHz (65 MHz) [76 MHz]	A Δf = ±500kHz V_{RF} = 10μV	87,5 MHz (65 MHz) [76 MHz]	5120	1 or 2	
	108 MHz		108 MHz	2101 C2		
VCO						
FM	98 MHz	A continuous wave V_{RF} = 1 mV	98 MHz	3141		152 ±1 kHz
AM - IF						
AM	468 kHz connect pin 24 of IC 7101 (AM Osc) with short wire to ground	C Δf = ±15kHz V_{RF} = 10mV	 see remark 5)	5140	1 or 2	
				5142		
AM -RF						
MW	560 kHz	 Δf = ±30kHz V_{RF} as low as possible	560 kHz	5105	1 or 2	
	1500 kHz		1500 kHz	2101 C4		
LW 4)	170 kHz		170 kHz	5106		
	260 kHz		260 kHz	2106		

Tuner Adj. Moby Analg 15.3.95

↕ repeat

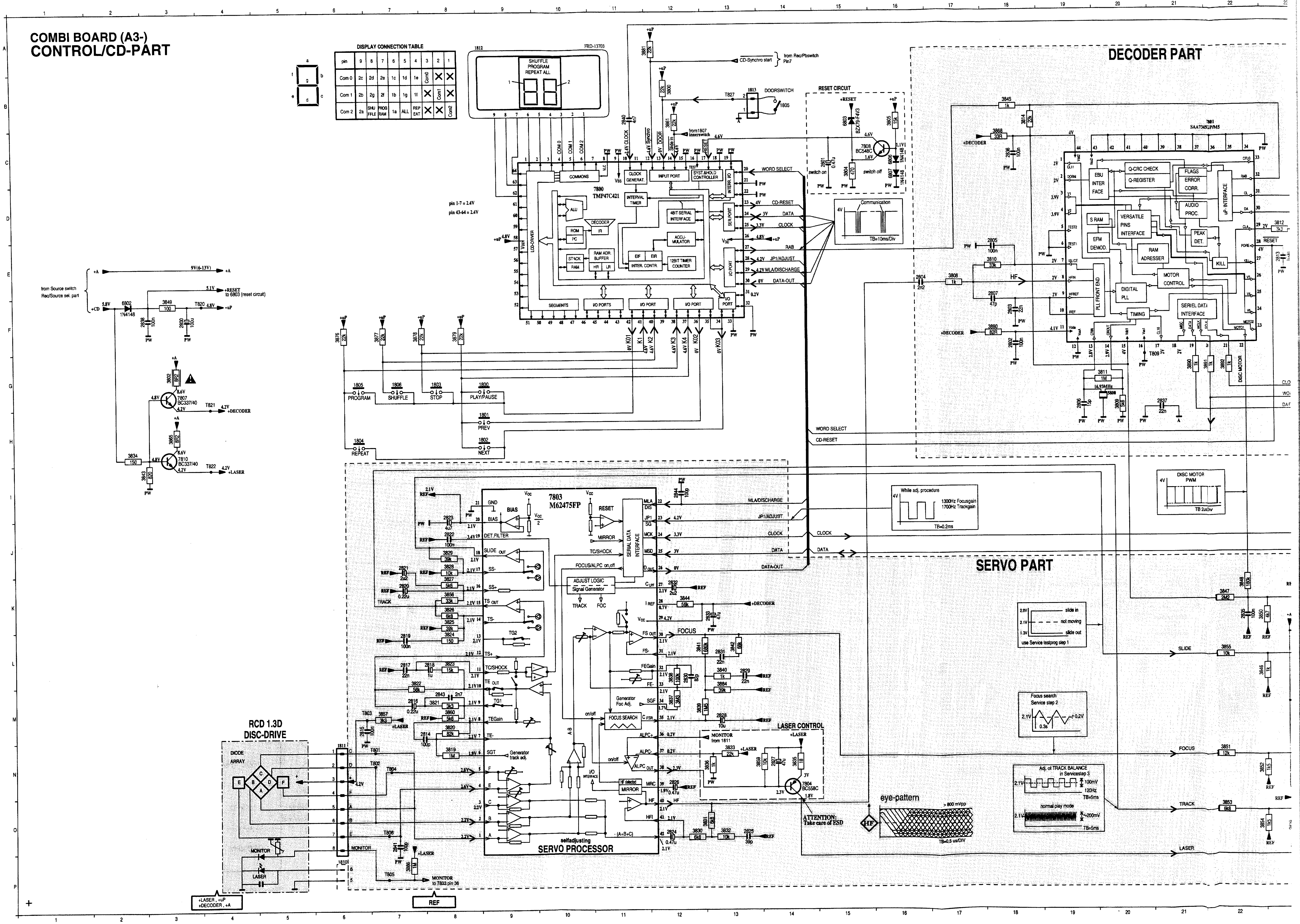
1) for East Europe /14 2) for Japan /06 3) for USA /17 4) LW not for all versions

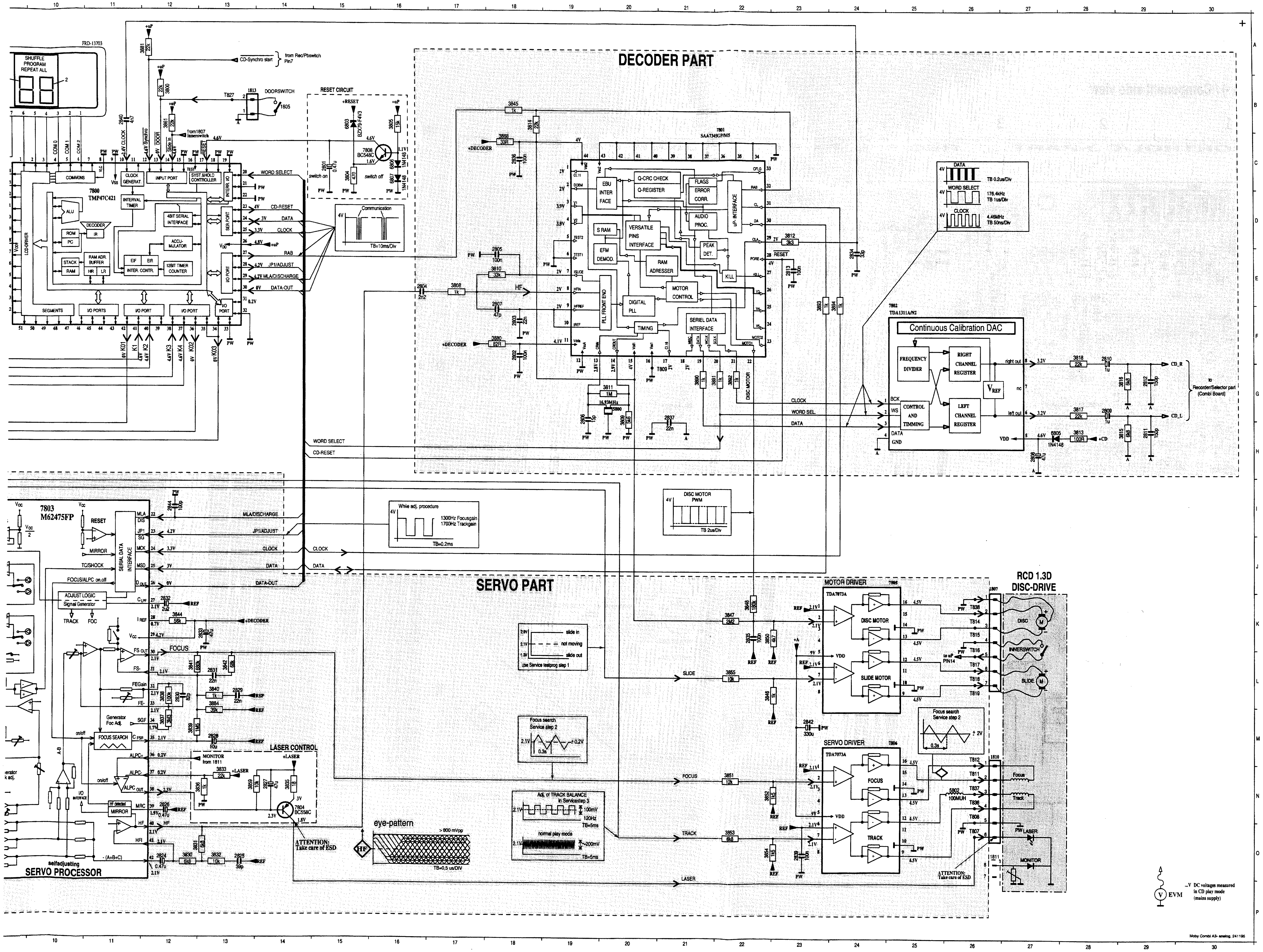
5) RC-network serves for damping the IF-filter while adjusting the other one.

COMBI BOARD (A3-)
CONTROL/CD-PART

DISPLAY CONNECTION TABLE

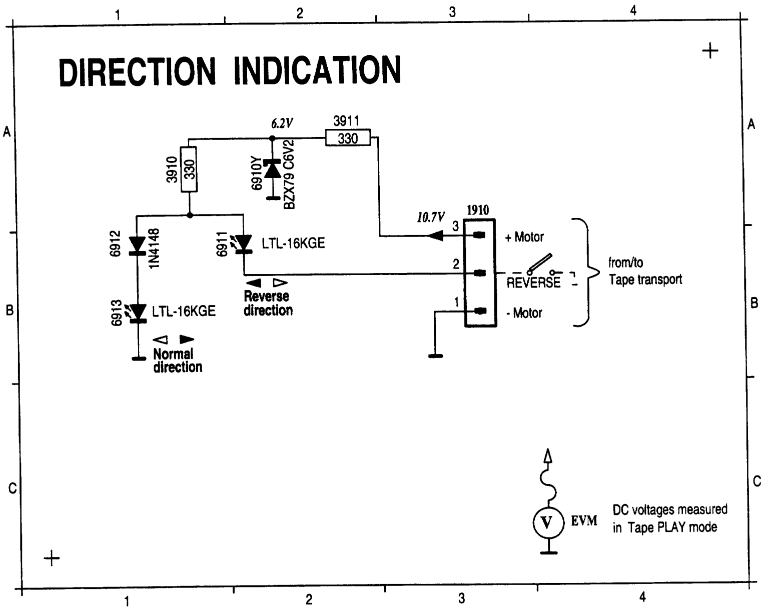
pin	9	8	7	6	5	4	3	2	1
Com 0	2c	2d	2e	1c	1d	1e	Com0	☒	☒
Com 1	2b	2g	2f	1b	1g	1f	☒	Com1	☒
Com 2	2a	SHUFFLE	PROGRAM	1a	ALL	REPEAT	☒	☒	Com2

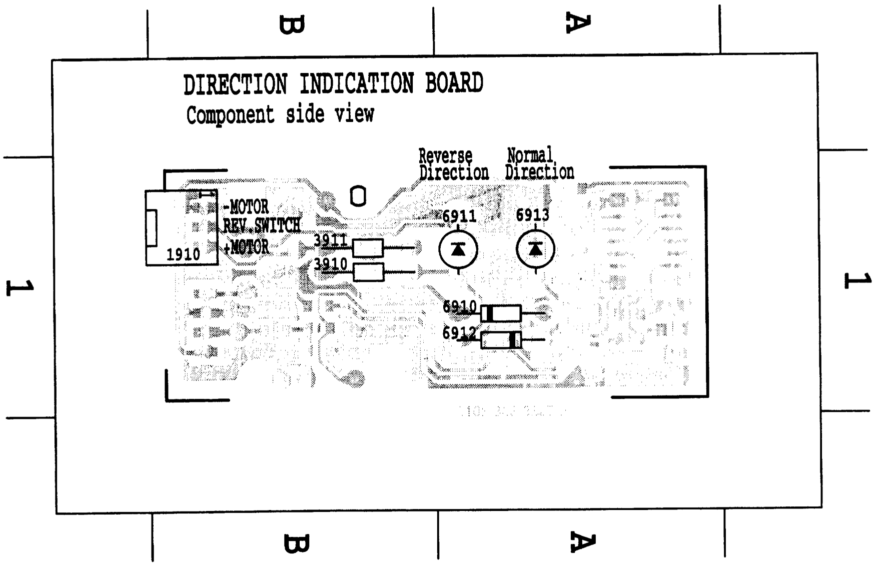

1812
FRD-13703
SHUFFLE
PROGRAM
REPEAT ALL
7800
TMP47C421
COMMONS
CLOCK GENERAT
INPUT PORT
SYST.&HOLD CONTROLLER
INTERVAL TIMER
ALU
DECODER
ROM
PC
IR
48 BIT SERIAL INTERFACE
ACCUMULATOR
STACK
RAM
RAM ADR. BUFFER
HR
LR
EIF
EIR
INTER. CONTR.
12 BIT TIMER COUNTER
LCD-DRIVER
SEGMENTS
I/O PORTS
I/O PORT
SER PORT
INTERR. I/O
pin 1-7 = 2.4V
pin 43-64 = 2.4V
CD-Synchro start
from Rec/Pbswitch Pin7
DOORSWITCH
1813
1805
from 1807 innerswitch
RESET CIRCUIT
+RESET
7808 BC548C
BZX79-F4V3
switch on
switch off
WORD SELECT
CD-RESET
DATA
CLOCK
RAB
JP1/ADJUST
MLA/DISCHARGE
DATA-OUT
Communication
TB=10ms/Div
from Source switch Rec/Source sel. part
9V(6-13V)
+RESET to 6803 (reset circuit)
6802 1N4148
7807 BC337/40
+DECODER
7810 BC337/40
+LASER
1805 PROGRAM
1806 SHUFFLE
1803 STOP
1800 PLAY/PAUSE
1801 PREV
1804 REPEAT
1802 NEXT
DECODER PART
7801 SAA7345GP/M5
EBU INTERFACE
Q-CRC CHECK
Q-REGISTER
FLAGS
ERROR CORR.
AUDIO PROC.
uP INTERFACE
S RAM
VERSATILE PINS INTERFACE
PEAK DET.
EFM DEMOD.
RAM ADRESSER
KILL
MOTOR CONTROL
PLL FRONT END
DIGITAL PLL
TIMING
SERIEL DATA INTERFACE
16.93MHz
DISC MOTOR
DISC MOTOR PWM
TB 2u/Div
HF
7803
M62475FP
BIAS
RESET
MIRROR
SERIAL DATA INTERFACE
DET. FILTER
TC/SHOCK
FOCUS/ALPC on,off
ADJUST LOGIC
Signal Generator
TRACK
FOC
FOCUS
FOCUS SEARCH
Generator Foc Adj.
Generator track adj.
LASER CONTROL
MONITOR from 1811
7804 BC558C
selfadjusting
SERVO PROCESSOR
While adj. procedure
1300Hz Focusgain
1700Hz Trackgain
TB=0.2ms
SERVO PART
slide in
not moving
slide out
use Service testprog step 1
Focus search
Service step 2
Adj. of TRACK BALANCE in Servicestep 3
normal play mode
TB=5ms
eye-pattern
> 800 mVpp
TB=0.5 us/DIV
ATTENTION: Take care of ESD
SLIDE
FOCUS
TRACK
LASER
RCD 1.3D
DISC-DRIVE
DIODE ARRAY
MONITOR
LASER
+LASER, +uP
+DECODER, +A
REF


DECODER PART
SERVO PART
RESET CIRCUIT
LASER CONTROL
RCD 1.3D
DISC-DRIVE
7800
TMP47C421
7801
SAA7345GP/M5
7802
TDA1311A/N2
Continuous Calibration DAC
7803
M62475FP
selfadjusting
SERVO PROCESSOR
MOTOR DRIVER
SERVO DRIVER
TDA7073A
DISC MOTOR
SLIDE MOTOR
FOCUS
TRACK
7808
BC548C
7804
BC558C
FRD-13703
SHUFFLE
PROGRAM
REPEAT ALL
DOORSWITCH
CD-Synchro start
from Rec/Pbswitch
Pin7
WORD SELECT
CD-RESET
DATA
CLOCK
RAB
JP1/ADJUST
MLA/DISCHARGE
DATA-OUT
Communication
TB=10ms/Div
DATA
TB 0.2us/Div
WORD SELECT
176.4kHz
TB 1us/Div
CLOCK
4.46MHz
TB 50ns/Div
CD_R
CD_L
to
Recorder/Selector part
(Combi Board)
EBU INTERFACE
Q-CRC CHECK
Q-REGISTER
FLAGS
ERROR CORR.
AUDIO PROC.
PEAK DET.
KILL
uP-INTERFACE
S RAM
VERSATILE PINS INTERFACE
EFM DEMOD.
RAM ADRESSER
MOTOR CONTROL
DIGITAL PLL
PLL FRONT END
TIMING
SERIEL DATA INTERFACE
FREQUENCY DIVIDER
RIGHT CHANNEL REGISTER
LEFT CHANNEL REGISTER
CONTROL AND TIMMING
DISC MOTOR PWM
TB 2us/Div
White adj. procedure
1300Hz Focusgain
1700Hz Trackgain
TB=0.2ms
slide in
not moving
slide out
use Service testprog step 1
Focus search
Service step 2
Adj. of TRACK BALANCE
in Servicestep 3
normal play mode
eye-pattern
> 800 mVpp
TB=0.5 us/DIV
ATTENTION:
Take care of ESD
MONITOR
from 1811
DISC
INNERSWITCH
SLIDE
Focus
Track
LASER
...V DC voltages measured
in CD play mode
(mains supply)
EVM
Moby Combi A3- analog. 241195

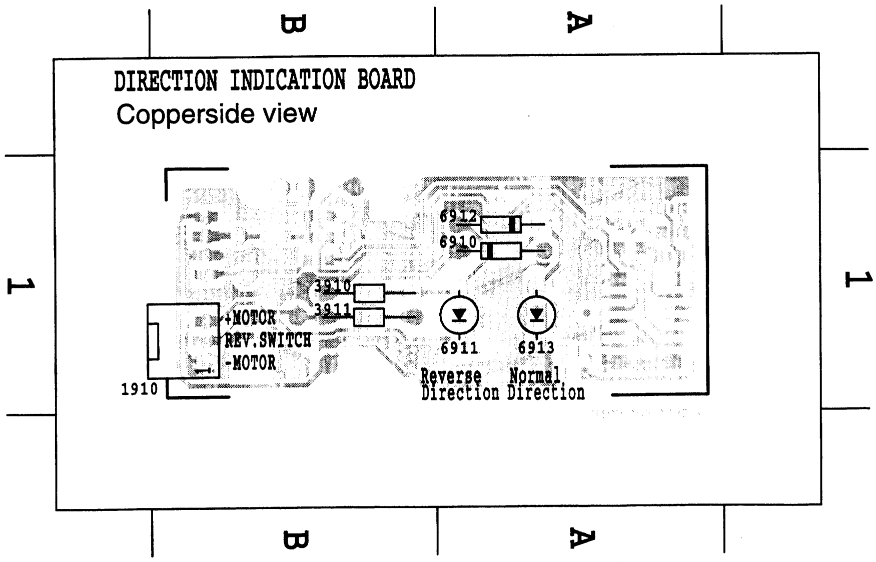
1800	G 9
1801	H 9
1802	H 9
1803	G 8
1804	H 6
1805	G 6
1806	G 7
1807	J26
1810	M26
1811	N 6
1812	A 9
1813	B13
2800	F 3
2801	C15
2802	F18
2803	F18
2804	E16
2805	E18
2806	G19
2807	F18
2808	H27
2809	G28
2810	F28
2811	H29
2812	G29
2813	E23
2814	M 7
2815	M 6
2816	M 7
2817	L 7
2818	L 8
2819	L 7
2820	K 7
2821	J 7
2822	J 8
2823	I 8
2824	O12
2825	O13
2826	N12
2827	N14
2828	M13
2829	L13
2830	L12
2831	L13
2832	K12
2833	K13
2834	E24
2835	K22
2836	C18
2837	G21
2838	F 3
2839	O23
2840	B11
2841	O 7
2842	M23
2843	M 8
2844	I12
3800	A12
3802	G 3
3804	C15
3805	B16
3808	E17
3809	G20
3810	E18
3811	G20
3812	D23
3813	H28
3814	B18
3815	H29
3816	G29
3817	G28
3818	F28
3819	N 8
3820	M 8
3821	M 8
3822	L 7
3823	L 8
3824	L 8
3825	K 8
3826	K 8
3827	K 8
3828	J 8
3829	J 8
3830	O12
3831	O12
3832	O13
3833	N13
3834	H 2
3835	N14
3836	N13
3837	M12
3838	L12
3839	M12
3840	L13
3841	L12
3842	L13
3843	I 2
3844	K12
3845	B18
3846	L22
3847	K22
3848	K22
3849	F 3
3850	K22
3851	N22
3852	N22
3853	O22
3854	O22
3855	L22
3856	K 8
3857	M 7
3859	N13
3860	M 8
3861	B12
3865	H 3
3868	C18
3876	F 6
3877	F 7
3878	F 7
3879	F 8
3880	F18
3881	A12
3884	M13
3886	P 7
3890	G21
3891	G21
3892	G22
3893	E23
3894	E24
5800	H20
5802	N26
6802	F 2
6803	B15
6805	H27
6806	C16
6807	C16
7800	D11
7801	B22
7802	F25
7803	I 9
7804	N14
7805	J25
7806	M25
7807	G 3
7808	C16
7810	H 3

1910	A 3
3910	A 1
3911	A 2
6910	A 2
6911	B 1
6912	B 1
6913	B 1


1
2
3
4
A
B
C
DIRECTION INDICATION
6.2V
3911
330
3910
330
6910Y
BZX79 C6V2
10.7V
1910
3
2
1
+ Motor
REVERSE
- Motor
from/to
Tape transport
6912
1N4148
6911
LTL-16KGE
Reverse
direction
6913
LTL-16KGE
Normal
direction
EVM
DC voltages measured
in Tape PLAY mode


B
A
1
DIRECTION INDICATION BOARD
Component side view
Reverse
Direction
Normal
Direction
-MOTOR
REV.SWITCH
+MOTOR
1910
3911
3910
6911
6913
6910
6912

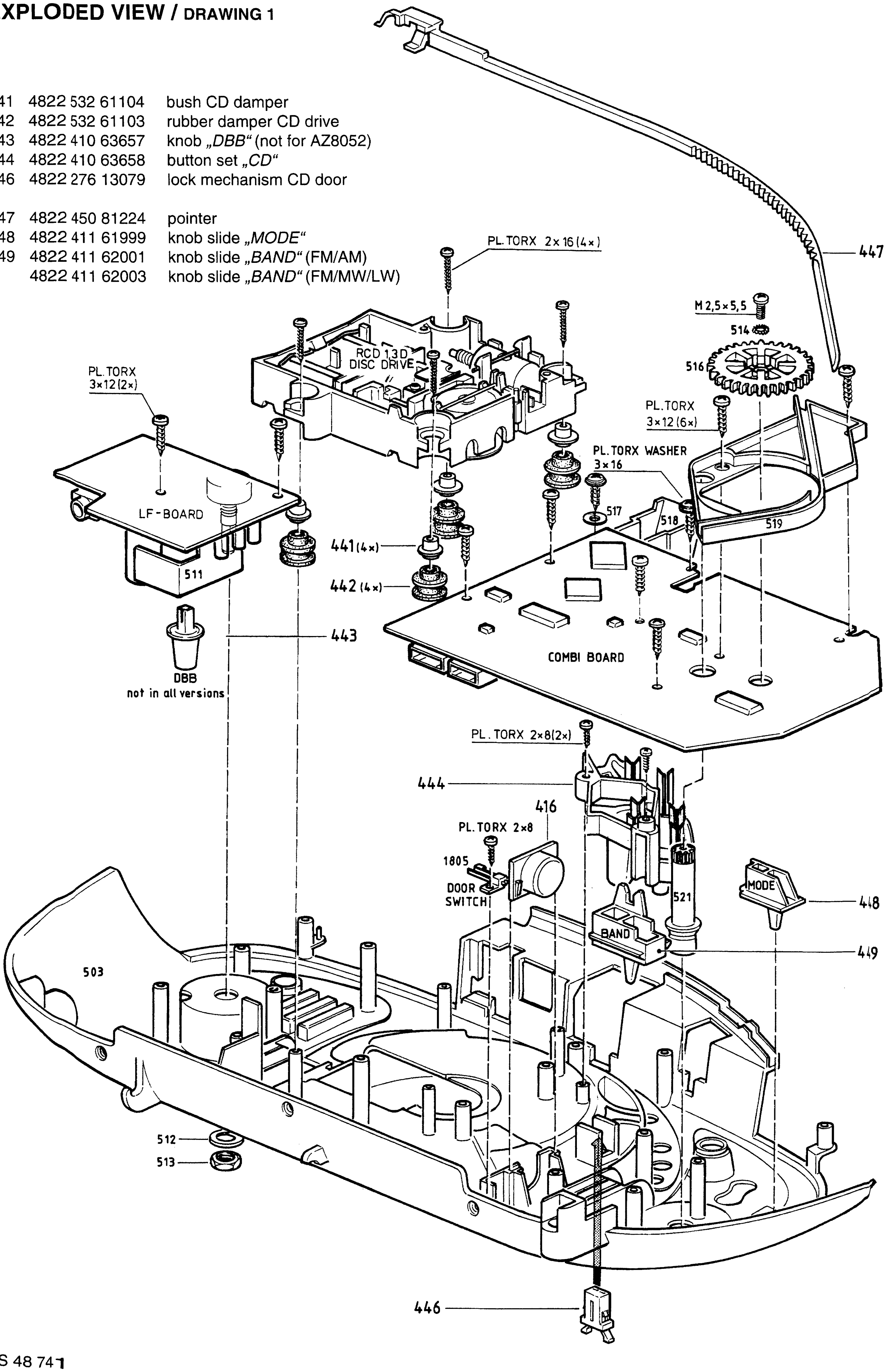
1910	B 1
3910	B 1
3911	B 1
6910	A 1
6911	A 1
6912	A 1
6913	A 1


B
A
1
DIRECTION INDICATION BOARD
Copperside view
6912
6910
3910
3911
+MOTOR
REV.SWITCH
-MOTOR
1910
6911
6913
Reverse
Direction
Normal
Direction

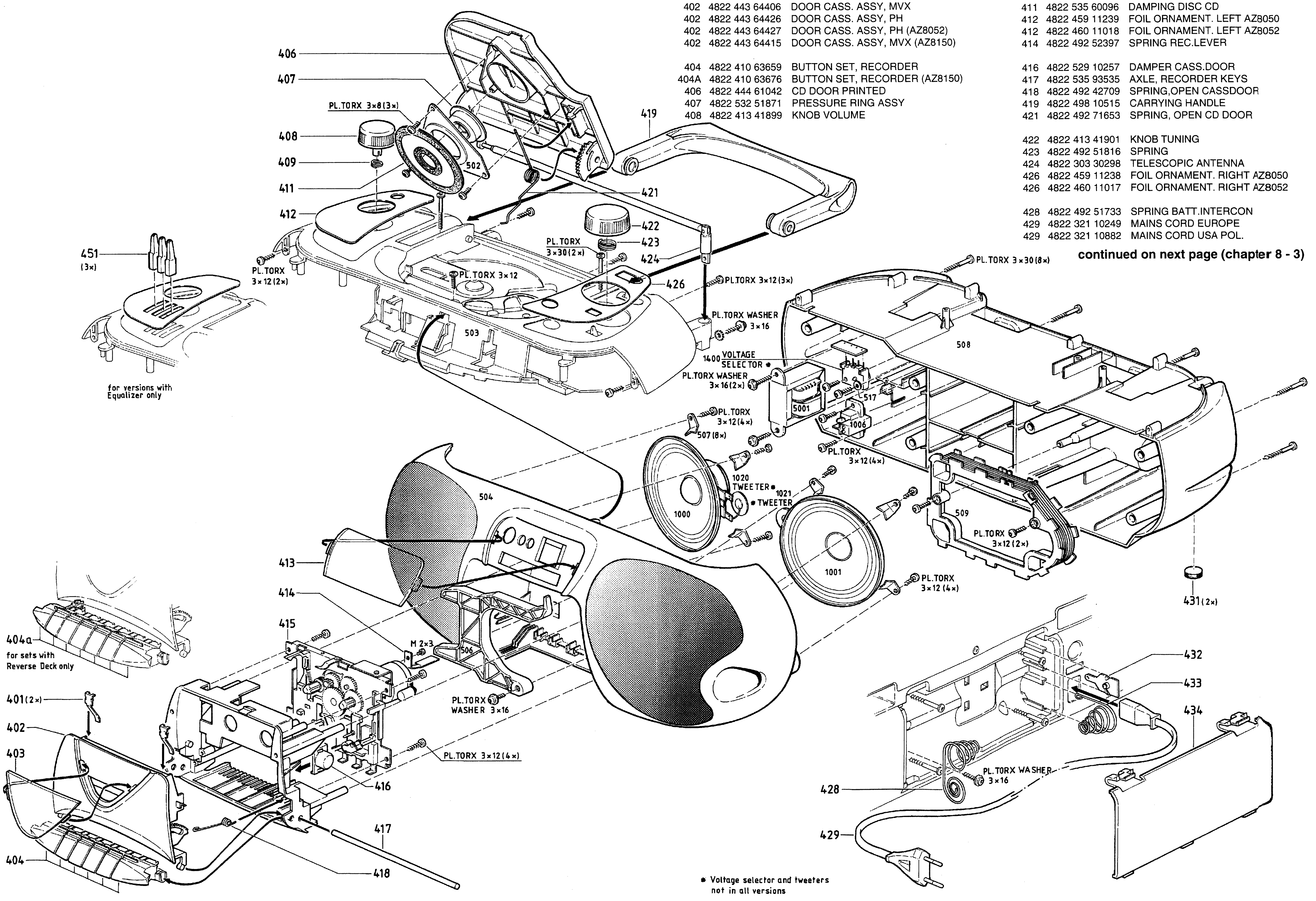
1910	B1
3910	B1
3911	B1
6910	A1
6911	A1
6912	A1
6913	A1

EXPLODED VIEW / DRAWING 1

441	4822 532 61104	bush CD damper
442	4822 532 61103	rubber damper CD drive
443	4822 410 63657	knob *„DBB“* (not for AZ8052)
444	4822 410 63658	button set *„CD“*
446	4822 276 13079	lock mechanism CD door
447	4822 450 81224	pointer
448	4822 411 61999	knob slide *„MODE“*
449	4822 411 62001	knob slide *„BAND“* (FM/AM)
	4822 411 62003	knob slide *„BAND“* (FM/MW/LW)


PL.TORX 2×16 (4×)
447
M 2,5×5,5
514
516
RCD 13D DISC DRIVE
PL.TORX 3×12 (2×)
PL.TORX 3×12 (6×)
PL.TORX WASHER 3×16
517
518
519
LF-BOARD
511
441 (4×)
442 (4×)
443
DBB
not in all versions
COMBI BOARD
PL.TORX 2×8 (2×)
444
416
PL.TORX 2×8
1805
DOOR SWITCH
MODE
448
521
BAND
449
503
512
513
446

EXPLODED VIEW / Drawing 2


406
407
PL.TORX 3×8(3×)
408
409
411
412
502
419
421
422
423
424
426
PL.TORX 3×30(2×)
PL.TORX 3×12
PL.TORX 3×12(2×)
451
(3×)
for versions with Equalizer only
503
PL.TORX 3×12(3×)
PL.TORX 3×30(8×)
PL.TORX WASHER 3×16
1400 VOLTAGE SELECTOR *
PL.TORX WASHER 3×16(2×)
508
5001
517
1006
PL.TORX 3×12(4×)
507 (8×)
PL.TORX 3×12(4×)
1020 TWEETER*
1021 * TWEETER
1000
1001
504
509
PL.TORX 3×12(2×)
PL.TORX 3×12 (4×)
431(2×)
413
414
415
M 2×3
506
404a
for sets with Reverse Deck only
PL.TORX WASHER 3×16
401(2×)
402
403
PL.TORX 3×12(4×)
416
417
418
404
432
433
434
PL.TORX WASHER 3×16
428
429

* Voltage selector and tweeters not in all versions

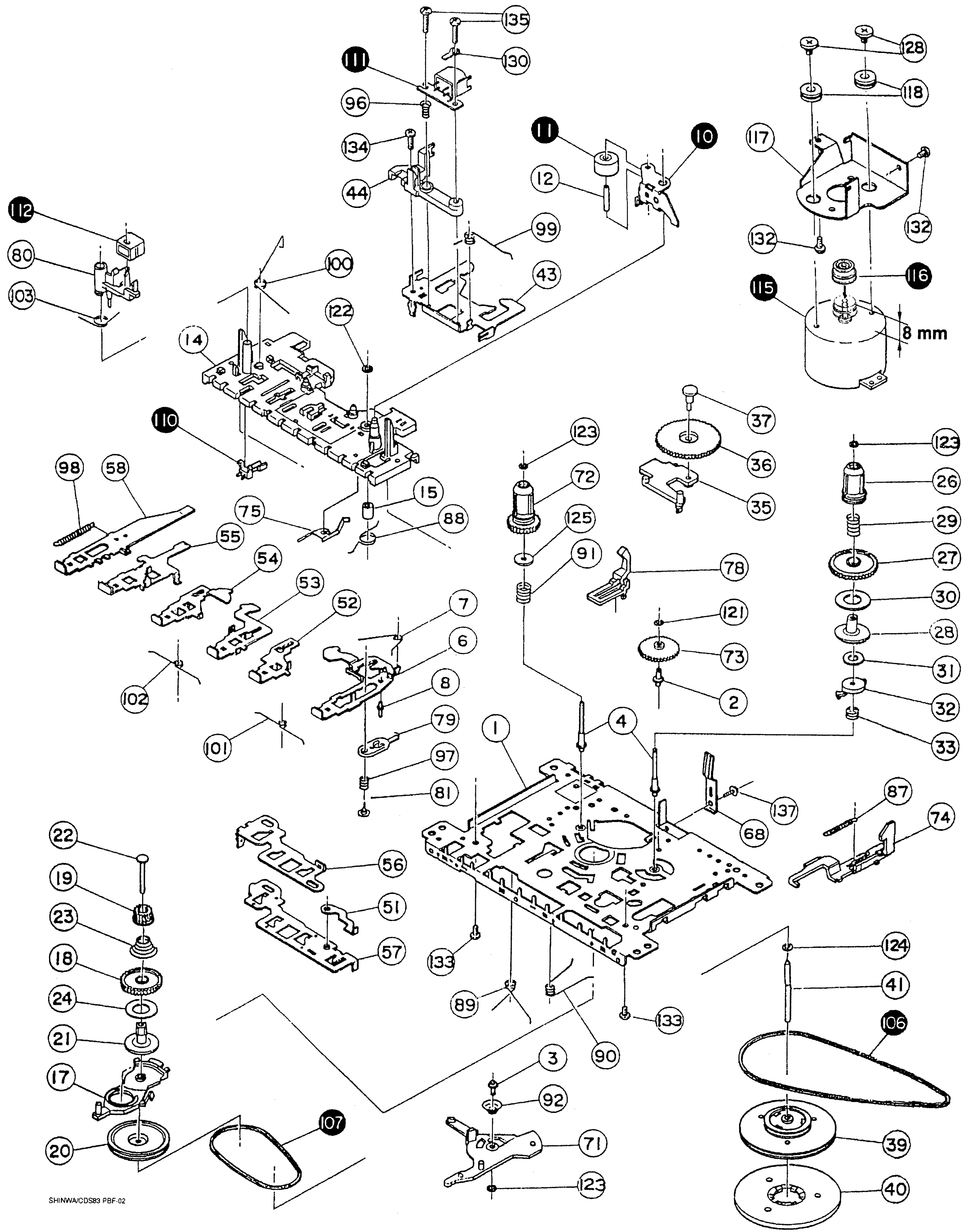
MECHANICAL PARTS

401	4822 492 70231	SPRING, CASS.PRESS
402	4822 443 64406	DOOR CASS. ASSY, MVX
402	4822 443 64426	DOOR CASS. ASSY, PH
402	4822 443 64427	DOOR CASS. ASSY, PH (AZ8052)
402	4822 443 64415	DOOR CASS. ASSY, MVX (AZ8150)
404	4822 410 63659	BUTTON SET, RECORDER
404A	4822 410 63676	BUTTON SET, RECORDER (AZ8150)
406	4822 444 61042	CD DOOR PRINTED
407	4822 532 51871	PRESSURE RING ASSY
408	4822 413 41899	KNOB VOLUME
409	4822 492 51374	SPRING KNOB CLAMP
411	4822 535 60096	DAMPING DISC CD
412	4822 459 11239	FOIL ORNAMENT. LEFT AZ8050
412	4822 460 11018	FOIL ORNAMENT. LEFT AZ8052
414	4822 492 52397	SPRING REC.LEVER
416	4822 529 10257	DAMPER CASS.DOOR
417	4822 535 93535	AXLE, RECORDER KEYS
418	4822 492 42709	SPRING,OPEN CASSDOOR
419	4822 498 10515	CARRYING HANDLE
421	4822 492 71653	SPRING, OPEN CD DOOR
422	4822 413 41901	KNOB TUNING
423	4822 492 51816	SPRING
424	4822 303 30298	TELESCOPIC ANTENNA
426	4822 459 11238	FOIL ORNAMENT. RIGHT AZ8050
426	4822 460 11017	FOIL ORNAMENT. RIGHT AZ8052
428	4822 492 51733	SPRING BATT.INTERCON
429	4822 321 10249	MAINS CORD EUROPE
429	4822 321 10882	MAINS CORD USA POL.

continued on next page (chapter 8 - 3)

CS 48 742

TAPE TRANSPORT AZ8050, AZ8051, AZ8052

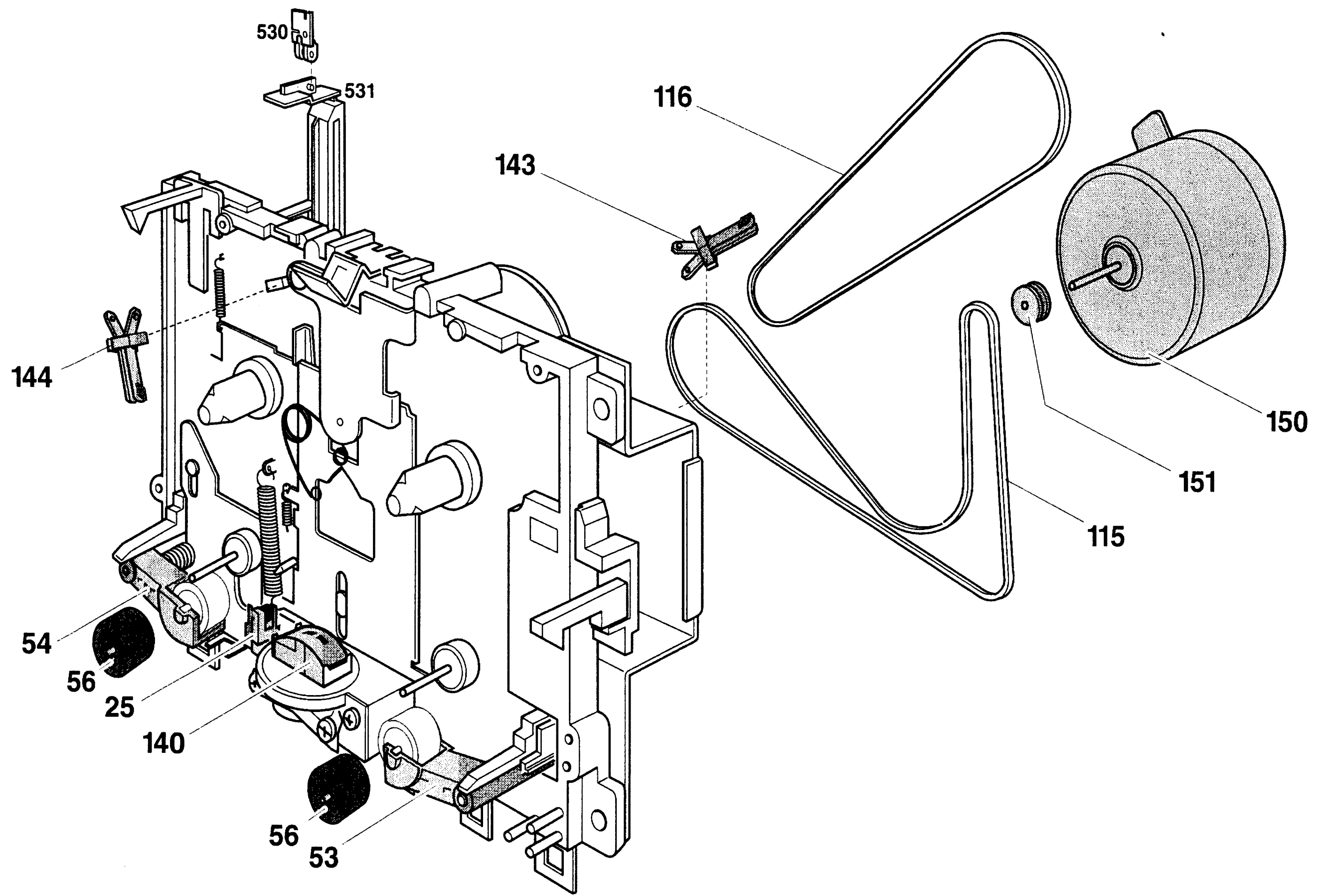

135
130
111
96
134
44
11
10
12
99
43
28
118
117
132
132
116
115
8 mm
112
80
103
100
122
14
110
98
58
75
15
88
55
54
53
52
7
6
8
79
97
81
102
101
1
4
123
72
125
91
78
121
73
2
37
36
35
123
26
29
27
30
28
31
32
33
137
68
87
74
22
19
23
18
24
21
17
20
107
56
51
57
133
89
90
133
3
92
71
123
124
41
106
39
40
SHINWA/CDS83 PBF-02

Only those parts of which a service code number is stated are normal service parts.

	4822 691 21014	TAPE TRANSPORT **CDS-83PBF-02**
10	4822 528 70849	PINCH ROLLER ARM
11	4822 528 70695	PINCH ROLLER ASSY
106	4822 358 31325	MAIN BELT
107	4822 358 31124	SUB BELT
110	4822 278 90663	LEAF SWITCH, MOTOR ON/OFF
111	4822 249 10413	REC/PB-HEAD, MS15R-AA2N1
112	4822 249 40268	ERASE HEAD, TDK6PA
115	4822 361 21656	MOTOR, EG-530AD-9B
116	4822 528 81497	MOTOR PULLEY

CS 48 743

REVERSE TAPE TRANSPORT AZ8150


530
531
116
143
144
150
151
115
54
56
25
140
56
53

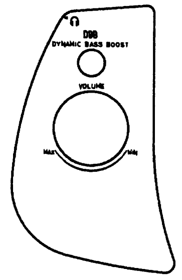
Only those parts of which a service code number is stated are normal service parts.

	4822 691 20906	REVERSE TAPE TRANSPORT **LDR37**
25	4822 249 40317	ERASE HEAD
53	4822 403 40522	ARM PINCHROLLER, RIGHT
54	4822 403 40523	ARM PINCHROLLER, LEFT
56	4822 528 70718	PINCHROLLER
115	4822 358 31119	MAIN BELT
116	4822 358 31117	SUB BELT
140	4822 249 10498	REC/PB HEAD
143	4822 278 90752	LEAF SWITCH, MOTOR ON/OFF
144	4822 278 90751	LEAF SWITCH, DIRECTION
150	4822 361 21697	MOTOR
151	4822 528 81519	MOTOR PULLEY

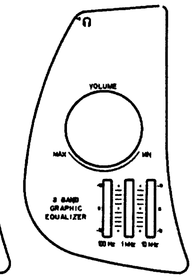
MECHANICAL PARTS continued

431	4822 462 40683	FOOT RUBBER
432	4822 290 80313	CONTACT PLATE BATT.+
433	4822 492 51961	SPRING, BATTERY -
434	4822 423 41255	BATTERY LID
441	4822 532 61104	BUSH, CD DAMPER
442	4822 532 61103	RUBBER DAMPER (CD)
443	4822 410 63657	KNOB PUSH, DBB
444	4822 410 63658	BUTTON SET, CD
446	4822 276 13079	LOCK MECHAN. CD DOOR
447	4822 450 81224	POINTER
448	4822 411 61999	KNOB SLIDE, MODE
449	4822 411 62001	KNOB SLIDE, BAND (FM/AM)
449	4822 411 62003	KNOB SLIDE, BAND (FM/MW/LW)
451	4822 411 62002	KNOB EQUALIZER (AZ8052)
1000	4822 240 30739	LOUDSPEAKER, 4",4OHM
1001	4822 240 30739	LOUDSPEAKER, 4",4OHM
1006	4822 265 20706	SOCKET MAINS UL POL.
1006	4822 267 30738	MAINS SOCKET, IEC
1020	4822 240 70273	TWEETER; PIEZZO
1021	4822 240 70273	TWEETER; PIEZZO
1805	4822 276 12165	SWITCH LEAF, DOOR
5001	4822 146 31464	TRANSF. MAINS /00
5001	4822 146 31463	TRANSF: MAINS /01
5001	4822 146 31454	TRANSF. MAINS /17

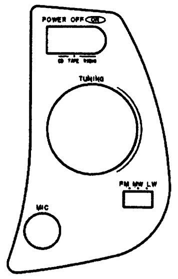
Overview
ORNAMENTAL FOILS


DBB
DYNAMIC BASS BOOST
VOLUME
MAX
MIN

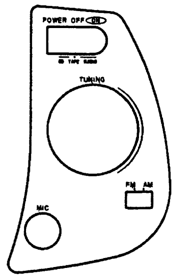
4822 459 11239


VOLUME
MAX
MIN
3 BAND
GRAPHIC
EQUALIZER
100 Hz
1 kHz
10 kHz

4822 460 11018


POWER OFF
ON
CD
TAPE
RADIO
TUNING
MIC
FM
MW
LW

4822 460 11017


POWER OFF
ON
CD
TAPE
RADIO
TUNING
MIC
FM
AM

4822 459 11238

ELECTRICAL PARTSLIST

FEATURE 1 Board (AZ8050, AZ8051, AZ8150)

MISCELLANEOUS

1254	4822 267 31468	SOCKET HEADPH. 3,5mm jack, black
1255	4822 276 12648	SWITCH PUSH, DBB
1400	4822 277 21234	VOLTAGE SELECTOR

DIODES

6250	5322 130 31504	BZX79-C20
6253	5322 130 30684	1N4002
6254	5322 130 30684	1N4002
6255	5322 130 30684	1N4002
6256	5322 130 30684	1N4002
6257	4822 130 30621	1N4148

TRANSISTORS

7250	5322 130 60068	BC558C
7251	4822 130 41327	BC327-40
7252	4822 130 44196	BC548C
7253	5322 130 60068	BC558C

INTEGRATED CIRCUITS

7254	4822 209 31544	TA8227P, POWER STAGE

RESISTORS

3250	4822 116 52224	470R	5%	0,5W
3251	4822 116 52224	470R	5%	0,5W
3254	4822 116 52263	2k7	5%	0,5W
3255	4822 116 52263	2k7	5%	0,5W
3256	4822 102 10447	POTMETER 2x50k (B)		
3257	4822 116 52224	470R	5%	0,5W
3258	4822 116 52224	470R	5%	0,5W
3259	4822 116 52175	100R	5%	0,5W
3260	4822 116 52175	100R	5%	0,5W
3262	4822 116 52217	270R	5%	0,5W
3263	4822 116 52224	470R	5%	0,5W
3264	4822 116 52224	470R	5%	0,5W
3265	4822 050 11002	1k	5%	0,2W
3266	4822 116 83864	10k	5%	0,5W
3267	4822 116 83864	10k	5%	0,5W
3268	4822 116 52206	120R	5%	0,5W
3269	4822 116 52206	120R	5%	0,5W
3270	4822 050 11002	1k	5%	0,2W
3271	4822 050 18208	8R2	1%	0,4W
3276	4822 116 52289	5k6	5%	0,16W
3277	4822 116 52303	8k2	5%	0,5W
3323	4822 116 52257	22k	5%	0,5W
3324	4822 116 52257	22k	5%	0,5W

CAPACITORS

2250	4822 126 12148	2,7nF	10%	16V
2251	4822 126 12148	2,7nF	10%	16V
2252	5322 121 42465	68nF	10%	63V
2253	5322 121 42465	68nF	10%	63V
2254	4822 124 40433	47µF	20%	25V
2255	4822 124 40433	47µF	20%	25V
2256	4822 122 33169	680pF	10%	50V
2257	4822 122 33169	680pF	10%	50V
2258	4822 124 41407	0,47µF	20%	63V
2259	4822 124 41407	0,47µF	20%	63V

CAPACITORS

2260	4822 124 41458	4700µF	20%	16V
2261	4822 124 40433	47µF	20%	25V
2264	4822 124 40746	0,22µF	20%	63V
2265	5322 121 42386	100nF	5%	63V
2266	4822 124 40433	47µF	20%	25V
2267	4822 124 40433	47µF	20%	25V
2268	4822 124 41997	470pF	20%	10V
2269	4822 124 41997	470pF	20%	10V
2271	4822 124 41407	0,47µF	20%	63V
2272	4822 124 41407	0,47µF	20%	63V

FEATURE 2 Board (AZ8052 only)

MISCELLANEOUS

1254	4822 267 31844	SOCKET HEADPH. 3,5mm jack ,green

DIODES

6250	5322 130 31504	BZX79-C20
6253	5322 130 30684	1N4002
6254	5322 130 30684	1N4002
6255	5322 130 30684	1N4002
6256	5322 130 30684	1N4002
6257	4822 130 30621	1N4148

TRANSISTORS

7250	5322 130 60068	BC558C
7251	4822 130 41327	BC327-40
7252	4822 130 44196	BC548C
7253	5322 130 60068	BC558C
7260	4822 130 44246	BC549C
7261	4822 130 44246	BC549C
7262	4822 130 44196	BC548C
7263	4822 130 44196	BC548C

INTEGRATED CIRCUITS

7254	4822 209 31544	TA8227P, POWER STAGE

RESISTORS

3250	4822 116 52256	2k2	5%	0,16W
3252	4822 116 52296	6k8	5%	0,5W
3253	4822 116 52296	6k8	5%	0,5W
3254	4822 116 52269	3k3	5%	0,5W
3255	4822 116 52269	3k3	5%	0,5W
3256	4822 102 10447	POTMETER 2x50k (B)		
3257	4822 116 52224	470R	5%	0,5W
3258	4822 116 52224	470R	5%	0,5W
3259	4822 116 52215	220R	5%	0,16W
3260	4822 116 52215	220R	5%	0,16W
3262	4822 116 52224	470R	5%	0,5W
3263	4822 116 52226	560R	5%	0,5W
3264	4822 116 52222	390R	5%	0,16W
3265	4822 050 11002	1k	5%	0,2W
3266	4822 116 52296	6k8	5%	0,5W
3267	4822 116 52296	6k8	5%	0,5W
3268	4822 116 52206	120R	5%	0,5W
3269	4822 116 52206	120R	5%	0,5W
3270	4822 116 52224	470R	5%	0,5W
3271	4822 050 18208	8R2	1%	0,4W
3272	4822 116 52296	6k8	5%	0,5W
3273	4822 116 52296	6k8	5%	0,5W
3274	4822 116 52256	2k2	5%	0,16W
3275	4822 116 52256	2k2	5%	0,16W
3276	4822 116 52289	5k6	5%	0,16W
3277	4822 116 52303	8k2	5%	0,5W
3279	4822 116 52238	12k	5%	0,5W
3280	4822 116 52238	12k	5%	0,5W
3281	4822 116 52296	6k8	5%	0,5W
3282	4822 116 52296	6k8	5%	0,5W
3283	4822 116 52272	330k	5%	0,5W
3284	4822 116 52272	330k	5%	0,5W
3285	4822 116 52231	820R	5%	0,5W
3286	4822 116 52231	820R	5%	0,5W
3298	4822 116 52175	100R	5%	0,5W
3312	4822 100 12267	SLIDE POT. 10k		
3313	4822 100 12267	SLIDE POT. 10k		
3314	4822 100 12267	SLIDE POT. 10k		
3315	4822 116 52283	4k7	5%	0,5W
3316	4822 116 52283	4k7	5%	0,5W
3317	4822 116 52296	6k8	5%	0,5W
3318	4822 116 52296	6k8	5%	0,5W
3319	4822 116 52244	15k	5%	0,5W
3320	4822 116 52244	15k	5%	0,5W
3321	4822 116 52269	3k3	5%	0,5W
3322	4822 116 52269	3k3	5%	0,5W

CAPACITORS

2250	4822 124 40246	4,7μF	20%	63V
2251	4822 124 40246	4,7μF	20%	63V
2252	4822 124 41584	100μF	20%	10V
2254	4822 124 41596	22μF	20%	50V
2255	4822 124 41596	22μF	20%	50V
2256	4822 122 33169	680pF	10%	50V
2257	4822 122 33169	680pF	10%	50V
2258	4822 124 41407	0,47μF	20%	63V
2259	4822 124 41407	0,47μF	20%	63V
2260	4822 124 41458	4700μF	20%	16V
2261	4822 124 40433	47μF	20%	25V
2262	4822 122 33169	680pF	10%	50V
2263	4822 122 33169	680pF	10%	50V
2264	5322 121 42386	100nF	5%	63V
2265	5322 121 42386	100nF	5%	63V
2266	4822 124 40433	47μF	20%	25V
2267	4822 124 40433	47μF	20%	25V
2268	4822 124 41997	470pF	20%	10V
2269	4822 124 41997	470pF	20%	10V
2271	4822 124 41407	0,47μF	20%	63V
2272	4822 124 41407	0,47μF	20%	63V
2276	4822 124 40746	0,22μF	20%	63V
2277	4822 124 40746	0,22μF	20%	63V
2278	4822 121 41856	22nF	5%	250V
2279	4822 121 41856	22nF	5%	250V
2280	4822 124 40746	0,22μF	20%	63V
2281	4822 124 40746	0,22μF	20%	63V
2282	4822 121 41856	22nF	5%	250V
2283	4822 121 41856	22nF	5%	250V
2284	4822 126 12148	2,7nF	10%	16V
2285	4822 126 12148	2,7nF	10%	16V
2286	4822 122 33197	1nF	10%	50V
2287	4822 122 33197	1nF	10%	50V
2288	4822 124 41579	10μF	20%	50V
2289	4822 124 41579	10μF	20%	50V
2290	4822 124 41407	0,47μF	20%	25V
2291	4822 124 41407	0,47μF	20%	25V
2296	4822 124 41997	470pF	20%	10V
2306	4822 122 33197	1nF	10%	50V
2307	4822 122 33197	1nF	10%	50V

COMBI Board A0

MISCELLANEOUS

1101	4822 277 21779	SWITCH SLIDE, FM/MW/LW
1102	4822 277 21304	SWITCH SLIDE, FM/AM
1250	4822 277 20594	SWITCH SLIDE, Rec/Pb
1251	4822 277 30689	SWITCH SLIDE, MODE
1263	4822 267 31883	SOCKET 3,5mm Jack (Micro)
1800	4822 276 13587	SWITCH TACT
1801	4822 276 13587	SWITCH TACT
1802	4822 276 13587	SWITCH TACT
1803	4822 276 13587	SWITCH TACT
1804	4822 276 13587	SWITCH TACT
1805	4822 276 13587	SWITCH TACT
1806	4822 276 13587	SWITCH TACT
1812	4822 130 91462	LCD, FRD-13703AC

DIODES

6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
6250	4822 130 30621	1N4148
6251	4822 130 30621	1N4148
6252	4822 130 30621	1N4148
6253	4822 130 30621	1N4148
6254	4822 130 30621	1N4148
6800	4822 130 30621	1N4148
6801	4822 130 30621	1N4148

TRANSISTORS

7251	4822 130 40937	BC548B
7252	4822 130 44196	BC548C
7253	4822 130 44196	BC548C
7254	5322 130 42136	BC848C(CHIP)
7801	4822 130 44196	BC548C
7807	4822 130 41344	BC337-40
7808	4822 130 44196	BC548C
7810	4822 130 41344	BC337-40

INTEGRATED CIRCUITS

7101	4822 209 32746	TEA5711T/N2, RADIO IC
7250	4822 209 32918	AN7318S
7800	4822 209 90147	TMP47C421ADF-NA54
7802	4822 209 32196	TDA1311AT/N2
7803	4822 209 60175	LM358D
7804	5322 209 11517	PC74HCU04T
7805	4822 209 32852	TDA7073A/N2
7806	4822 209 32852	TDA7073A/N2
7850	4822 209 31064	TDA1301T/N1
7860	4822 209 33339	SAA7345GP/M5

COILS

5105	4822 156 21738	COIL VAR., MW-RF
5106	4822 156 21739	COIL VAR., LW-RF
5120	4822 157 70513	COIL, FM-RF
5120	4822 157 70762	COIL, FM-RF /14 only
5125	4822 156 30947	RF COIL 1,5 TURNS
5125	4822 157 70033	RF COIL 2,5 TURNS /14 only
5130	4822 156 21737	COIL VAR.,MW-OSC.
5131	4822 156 21737	COIL VAR.,MW-OSC.
5140	4822 158 60511	AM-IF FILTER 450kHz
5142	4822 157 70302	AM-IF FILTER 450kHz
5143	4822 242 81154	FILTER KIT, FM-IF
5250	4822 156 20946	OSC.COIL 100kHz
5800	4822 157 53941	100μH
5801	4822 157 62552	COIL 2,2μH
5802	4822 157 62552	COIL 2,2μH
5860	4822 242 81865	CER.RES. 16,93MHz

RESISTORS

3130	4822 116 52195	47R	5%	0,5W
3140	4822 116 52297	68k	5%	0,5W
3141	4822 100 20167	TRIMPOT. 50k lin.		
3142	4822 116 52256	2k2	5%	0,16W
3143	4822 116 52234	100k	5%	0,5W
3150	4822 116 52238	12k	5%	0,5W
3151	4822 116 52238	12k	5%	0,5W
3152	4822 116 52283	4k7	5%	0,5W
3153	4822 116 52283	4k7	5%	0,5W
3160	4822 116 52195	47R	5%	0,5W
3250	4822 116 52224	470R	5%	0,5W
3251	4822 116 52224	470R	5%	0,5W
3252	4822 116 52238	12k	5%	0,5W
3253	4822 116 52238	12k	5%	0,5W
3254	4822 116 52219	330R	5%	0,5W
3255	4822 116 52219	330R	5%	0,5W
3256	4822 116 52224	470R	5%	0,5W
3257	4822 116 52224	470R	5%	0,5W
3259	4822 116 52213	180R	5%	0,5W
3260	4822 116 52264	27k	5%	0,5W
3261	4822 116 52264	27k	5%	0,5W
3262	4822 116 52296	6k8	5%	0,5W
3263	4822 116 52272	330k	5%	0,5W
3264	4822 116 52245	150k	5%	0,16W
3265	4822 116 52245	150k	5%	0,16W
3266	4822 116 52252	180k	5%	0,5W
3267	4822 116 52252	180k	5%	0,5W
3268	4822 116 52191	33R	5%	0,5W
3269	4822 111 30893	4M7	5%	0,2W
3270	4822 116 52303	8k2	5%	0,5W
3271	4822 116 52303	8k2	5%	0,5W
3272	4822 116 52211	150R	5%	0,5W
3273	4822 116 52244	15k	5%	0,5W
3274	4822 116 83864	10k	5%	0,5W
3275	4822 116 83864	10k	5%	0,5W
3276	4822 116 52244	15k	5%	0,5W
3277	4822 116 52244	15k	5%	0,5W
3278	4822 116 52283	4k7	5%	0,5W
3279	4822 116 52284	47k	5%	0,5W
3280	4822 116 52224	470R	5%	0,5W
3281	4822 116 52224	470R	5%	0,5W
3284	4822 116 52283	4k7	5%	0,5W
3285	4822 116 52283	4k7	5%	0,5W
3800	4822 116 83864	10k	5%	0,5W
3801	4822 116 83864	10k	5%	0,5W
3802	4822 052 10159	15R	5%	0,33W
3803	4822 116 52257	22k	5%	0,5W
3804	4822 116 52289	5k6	5%	0,16W
3805	4822 050 11002	1k	5%	0,2W
3806	4822 050 11002	1k	5%	0,2W
3807	4822 116 52303	8k2	5%	0,5W
3808	4822 116 52284	47k	5%	0,5W
3809	4822 116 52289	5k6	5%	0,16W
3810	4822 116 52269	3k3	5%	0,5W
3811	4822 116 52289	5k6	5%	0,16W
3812	4822 116 52269	3k3	5%	0,5W
3813	4822 116 52175	100R	5%	0,5W
3814	4822 116 52296	6k8	5%	0,5W
3815	4822 116 52296	6k8	5%	0,5W
3816	4822 116 52257	22k	5%	0,5W
3817	4822 116 52257	22k	5%	0,5W
3818	4822 050 11002	1k	5%	0,2W
3819	4822 116 52228	680R	5%	0,5W

RESISTORS

3820	4822 116 52239	120k	5%	0,5W
3821	4822 116 52239	120k	5%	0,5W
3822	4822 116 52239	120k	5%	0,5W
3823	4822 116 52256	2k2	5%	0,16W
3824	4822 116 52239	120k	5%	0,5W
3825	4822 116 83864	10k	5%	0,5W
3826	4822 116 83864	10k	5%	0,5W
3827	4822 116 83864	10k	5%	0,5W
3828	4822 116 83864	10k	5%	0,5W
3829	4822 116 83864	10k	5%	0,5W
3830	4822 116 83864	10k	5%	0,5W
3831	4822 116 52256	2k2	5%	0,16W
3832	4822 050 11002	1k	5%	0,2W
3833	4822 116 83864	10k	5%	0,5W
3834	4822 116 52175	100R	5%	0,5W
3835	4822 116 52264	27k	5%	0,5W
3836	4822 116 52207	1k2	5%	0,5W
3837	4822 116 52296	6k8	5%	0,5W
3838	4822 116 52251	18k	5%	0,5W
3839	4822 116 52207	1k2	5%	0,5W
3840	4822 116 52296	6k8	5%	0,5W
3841	4822 111 50499	3M3	5%	0,2W
3842	4822 116 52244	15k	5%	0,5W
3843	4822 116 52191	33R	5%	0,5W
3844	4822 050 11002	1k	5%	0,2W
3845	4822 116 52175	100R	5%	0,5W
3846	4822 116 83864	10k	5%	0,5W
3847	4822 116 52269	3k3	5%	0,5W
3848	4822 050 11003	10k	1%	0,4W
3849	4822 116 52269	3k3	5%	0,5W
3850	4822 050 11003	10k	1%	0,4W
3851	4822 116 52264	27k	5%	0,5W
3852	4822 050 11002	1k	5%	0,2W
3853	4822 116 52296	6k8	5%	0,5W
3854	4822 116 83864	10k	5%	0,5W
3855	4822 050 11002	1k	5%	0,2W
3856	4822 116 52257	22k	5%	0,5W
3857	4822 116 52256	2k2	5%	0,16W
3858	4822 116 52277	39k	5%	0,5W
3859	4822 116 52256	2k2	5%	0,16W
3861	4822 116 83864	10k	5%	0,5W
3862	4822 116 52235	1M	5%	0,5W
3864	4822 116 52256	2k2	5%	0,16W
3865	4822 052 10828	8R2	5%	0,3W
3867	4822 050 11002	1k	5%	0,2W
3871	4822 116 52257	22k	5%	0,5W
3872	4822 050 11002	1k	5%	0,2W
3873	4822 050 11002	1k	5%	0,2W
3874	4822 050 11002	1k	5%	0,2W
3875	4822 116 52238	12k	5%	0,5W
3876	4822 116 83864	10k	5%	0,5W
3877	4822 116 52226	560R	5%	0,5W
3878	4822 116 52256	2k2	5%	0,16W
3879	4822 116 52256	2k2	5%	0,16W
3880	4822 116 52219	330R	5%	0,5W
3881	4822 116 52257	22k	5%	0,5W
3882	4822 116 52219	330R	5%	0,5W
3884	4822 116 52245	150k	5%	0,16W
3885	4822 116 52257	22k	5%	0,5W
3886	4822 116 52235	1M	5%	0,5W
3889	4822 116 52257	22k	5%	0,5W
3890	4822 050 11002	1k	5%	0,2W
3891	4822 050 11002	1k	5%	0,2W
3892	4822 050 11002	1k	5%	0,2W
3894	4822 116 52238	12k	5%	0,5W
3896	4822 116 52257	22k	5%	0,5W
3897	4822 116 52257	22k	5%	0,5W
3898	4822 116 52257	22k	5%	0,5W
3899	4822 116 52256	2k2	5%	0,16W
3900	4822 116 52235	1M	5%	0,5W
3901	4822 116 52224	470R	5%	0,5W
3905	4822 116 52256	2k2	5%	0,16W
3909	4822 116 52175	100R	5%	0,5W
3910	4822 116 52257	22k	5%	0,5W
3911	4822 116 52175	100R	5%	0,5W
3912	4822 116 83864	10k	5%	0,5W
3913	4822 116 52175	100R	5%	0,5W

CAPACITORS

2101	4822 125 50681	VARCO TUNING			
2101	4822 125 50648	VARCO TUNING			for /14 only
2103	4822 122 33195	100pF	10%	50V	
2106	4822 125 50045	TRIMCAP. 1p8 - 20p			
2120	4822 122 33191	22pF	5%	50V	
2120	4822 126 13509	8p2	10%	50V	for /14 only
2121	4822 126 13508	3p3	10%	50V	
2125	4822 126 13505	18pF	5%	50V	
2125	4822 126 12284	5p6	5%	50V	for /14 only
2126	4822 126 10139	390pF	10%		
2127	4822 126 13508	3p3	10%	50V	
2130	4822 126 12284	5p6	5%	50V	
2131	4822 126 13506	100pF	5%	50V	
2132	4822 125 50045	TRIMCAP. 1p8 - 20p			
2140	4822 124 41576	2,2µF	20%	50V	
2141	4822 124 41579	10µF	20%	50V	
2142	4822 124 41579	10µF	20%	50V	
2143	4822 126 12787	330pF	10%	50V	
2144	4822 124 40746	0,22µF	20%	63V	
2145	4822 124 41407	0,47µF	20%	63V	
2146	4822 124 41407	0,47µF	20%	63V	
2147	4822 124 40242	1µF	20%	63V	
2150	4822 126 12147	22nF	10%	25V	
2151	4822 126 12147	22nF	10%	25V	
2152	4822 124 40242	1µF	20%	63V	
2153	4822 124 40242	1µF	20%	63V	
2160	4822 124 40433	47µF	20%	25V	
2250	4822 122 33197	1nF	10%	50V	
2251	4822 122 33197	1nF	10%	50V	
2252	4822 124 41579	10µF	20%	50V	
2253	4822 124 41579	10µF	20%	50V	
2254	4822 126 13507	91pF	5%	50V	
2255	4822 126 13507	91pF	5%	50V	
2256	4822 121 43054	1n8	10%	50V	
2257	4822 124 41579	10µF	20%	50V	
2258	4822 126 10139	390pF	10%		
2259	4822 126 10139	390pF	10%		
2260	4822 124 40184	1000µF	20%	10V	
2261	4822 121 51387	10nF	20%	16V	
2262	4822 122 10466	220pF	10%		
2263	4822 122 10466	220pF	10%		
2264	4822 126 13098	5,6nF	20%	16V	
2265	4822 126 13098	5,6nF	20%	16V	
2266	4822 121 51387	10nF	20%	16V	
2267	4822 124 41596	22µF	20%	50V	
2268	4822 124 40433	47µF	20%	25V	
2269	4822 124 40433	47µF	20%	25V	
2270	4822 122 33197	1nF	10%	50V	
2271	4822 122 33197	1nF	10%	50V	
2272	4822 121 51387	10nF	20%	16V	

CAPACITORS

2273	4822 121 51387	10nF	20%	16V
2274	4822 124 40246	4,7µF	20%	63V
2275	4822 126 11585	22nF		50V
2276	4822 124 41596	22µF	20%	50V
2277	4822 124 40246	4,7µF	20%	63V
2278	4822 124 41596	22µF	20%	50V
2279	4822 122 33519	470pF	10%	50V
2280	4822 122 33519	470pF	10%	50V
2281	4822 126 11585	22nF		50V
2282	4822 126 11585	22nF		50V
2800	4822 126 12882	100nF		50V
2801	4822 124 40246	4,7µF	20%	63V
2802	4822 126 12882	100nF		50V
2803	4822 122 33848	47pF	5%	50V
2804	4822 122 33848	47pF	5%	50V
2805	4822 122 33848	47pF	5%	50V
2806	4822 122 10462	15pF	5%	50V
2807	4822 122 33848	47pF	5%	50V
2808	4822 124 40196	220µF	20%	16V
2809	4822 124 40242	1µF	20%	63V
2810	4822 124 40242	1µF	20%	63V
2811	4822 122 33849	150pF	10%	50V
2812	4822 122 33849	150pF	10%	50V
2813	4822 122 33848	47pF	5%	50V
2814	4822 126 12339	2,2nF	10%	16V
2815	4822 126 12882	100nF		50V
2816	4822 122 10319	82pF	5%	50V
2817	4822 122 10462	15pF	5%	50V
2818	4822 122 33849	150pF	10%	50V
2819	4822 122 10459	560pF	10%	50V
2820	4822 126 12878	1,5nF	10%	16V
2821	4822 122 10466	220pF	10%	
2822	4822 122 10466	220pF	10%	
2823	4822 122 10466	220pF	10%	
2824	4822 122 10466	220pF	10%	
2825	4822 122 10466	220pF	10%	
2826	4822 122 10466	220pF	10%	
2827	4822 122 10466	220pF	10%	
2828	4822 122 10466	220pF	10%	
2829	4822 122 10466	220pF	10%	
2830	4822 122 10466	220pF	10%	
2831	4822 124 40196	220µF	20%	16V
2832	4822 124 41407	0,47µF	20%	63V
2833	4822 124 40433	47µF	20%	25V
2834	4822 126 13098	5,6nF	20%	16V
2835	4822 122 33848	47pF	5%	50V
2836	4822 126 12785	47nF		50V
2837	4822 122 10459	560pF	10%	50V
2838	4822 121 51387	10nF	20%	16V
2839	4822 121 51387	10nF	20%	16V
2840	4822 122 33197	1nF	10%	50V
2841	4822 126 11585	22nF		50V
2842	4822 124 80791	470µF	20%	16V
2843	4822 124 40242	1µF	20%	63V
2844	4822 122 33069	33pF	5%	50V
2845	4822 122 33849	150pF	10%	50V
2846	4822 122 10577	3,3nF	10%	16V
2847	4822 124 40433	47µF	20%	25V
2848	4822 122 33191	22pF	5%	50V
2850	4822 124 40246	4,7µF	20%	63V
2851	4822 121 51387	10nF	20%	16V
2852	4822 126 12882	100nF		50V
2853	4822 126 12882	100nF		50V
2856	4822 121 43526	47nF	5%	100V
2857	4822 122 33848	47pF	5%	50V
2858	4822 126 11585	22nF		50V
2860	4822 124 40433	47µF	20%	25V
2861	4822 126 12882	100nF		50V
2862	4822 122 10462	15pF	5%	50V
2865	4822 124 41407	0,47µF	20%	63V
2866	4822 126 12785	47nF		50V

DIRECTION INDICATION Board (AZ8150 only)

RESISTORS

3910	4822 116 52219	330R	5%	0,5W
3911	4822 116 52219	330R	5%	0,5W

DIODES

6910	4822 130 34167	BZX79-C6v2
6911	4822 130 83363	LTL-16KGE, LED REVERSE DIRECT.
6912	4822 130 30621	1N4148
6913	4822 130 83363	LTL-16KGE, LED NORMAL DIRECT.

COMBI Board ('A3-')

MISCELLANEOUS

1101	4822 277 21779	SWITCH SLIDE, FM/MW/LW
1102	4822 277 21304	SWITCH SLIDE, FM/AM
1250	4822 277 20594	SWITCH SLIDE, Rec/Pb
1251	4822 277 30689	SWITCH SLIDE, MODE
1263	4822 267 31883	SOCKET 3,5mm Jack, MICRO
1800	4822 276 13587	SWITCH TACT
1801	4822 276 13587	SWITCH TACT
1802	4822 276 13587	SWITCH TACT
1803	4822 276 13587	SWITCH TACT
1804	4822 276 13587	SWITCH TACT
1805	4822 276 13587	SWITCH TACT
1806	4822 276 13587	SWITCH TACT
1812	4822 130 91462	LCD, FRD-13703AC

CAPACITORS

2101	4822 125 50681	VARCO TUNING		
2103	4822 122 33195	100pF	10%	50V
2106	4822 125 50045	1,8-20pF TRIMCAP.		
2120	4822 122 33192	27pF	5%	50V
2125	4822 126 13674	27pF	5%	N330
2127	4822 126 12939	2,2pF	10%	50V
2130	4822 126 12284	5,6pF	5%	50V
2131	4822 126 13506	100pF	5%	50V
2132	4822 125 50045	1,8-20pF TRIMCAP.		
2139	4822 121 51387	10nF	20%	16V
2140	4822 124 41576	2,2µF	20%	50V
2141	4822 124 41579	10µF	20%	50V
2142	4822 124 41579	10µF	20%	50V
2143	4822 126 12787	330pF	10%	50V
2144	4822 124 40746	0,22µF	20%	63V
2145	4822 124 41407	0,47µF	20%	63V
2146	4822 124 41407	0,47µF	20%	63V
2147	4822 124 40242	1µF	20%	63V
2150	4822 126 12147	22nF	10%	25V
2150	4822 126 13676	33nF	10%	25V
2151	4822 126 12147	22nF	10%	25V
2151	4822 126 13676	33nF	10%	25V
2152	4822 124 40242	1µF	20%	63V
2153	4822 124 40242	1µF	20%	63V
2160	4822 124 40433	47µF	20%	25V
2250	4822 122 33197	1nF	10%	50V
2251	4822 122 33197	1nF	10%	50V
2252	4822 124 41579	10µF	20%	50V
2253	4822 124 41579	10µF	20%	50V
2254	4822 126 13507	91pF	5%	50V
2255	4822 126 13507	91pF	5%	50V
2256	4822 121 43054	1,8nF	10%	50V
2257	4822 124 41579	10µF	20%	50V
2258	4822 126 10139	390pF	10%	
2259	4822 126 10139	390pF	10%	
2260	4822 124 40184	1000µF	20%	10V
2261	4822 121 51387	10nF	20%	16V
2262	4822 122 10466	220pF	10%	
2263	4822 122 10466	220pF	10%	
2264	4822 126 13098	5,6nF	20%	16V
2265	4822 126 13098	5,6nF	20%	16V
2266	4822 121 51387	10nF	20%	16V
2267	4822 124 41596	22µF	20%	50V
2268	4822 124 40433	47µF	20%	25V
2269	4822 124 40433	47µF	20%	25V
2270	4822 122 33197	1nF	10%	50V
2271	4822 122 33197	1nF	10%	50V
2272	4822 121 51387	10nF	20%	16V
2273	4822 121 51387	10nF	20%	16V

CAPACITORS

2274	4822 124 40246	4,7µF	20%	63V
2275	4822 126 11585	22nF	20%	50V
2276	4822 124 41596	22µF	20%	50V
2277	4822 124 40246	4,7µF	20%	63V
2278	4822 124 41596	22µF	20%	50V
2279	4822 122 33519	470pF	10%	50V
2280	4822 122 33519	470pF	10%	50V
2281	4822 126 11585	22nF	20%	50V
2282	4822 126 11585	22nF	20%	50V
2800	4822 124 41584	100µF	20%	10V
2801	4822 124 41407	0,47µF	20%	63V
2802	4822 126 12882	100nF	20%	50V
2803	4822 126 11585	22nF	20%	50V
2804	4822 126 12339	2,2nF	10%	16V
2805	4822 126 12882	100nF	20%	50V
2806	4822 122 10462	15pF	5%	50V
2807	4822 122 33848	47pF	5%	50V
2808	4822 124 40433	47µF	20%	25V
2809	4822 124 40242	1µF	20%	63V
2810	4822 124 40242	1µF	20%	63V
2811	4822 122 33849	150pF	10%	50V
2812	4822 122 33849	150pF	10%	50V
2813	4822 126 12882	100nF	20%	50V
2814	4822 122 33195	100pF	10%	50V
2815	4822 126 12882	100nF	20%	50V
2816	4822 124 41407	0,47µF	20%	63V
2817	4822 121 41856	22nF	5%	250V
2818	4822 124 40242	1µF	20%	63V
2819	5322 121 42386	100nF	5%	63V
2820	4822 124 40746	0,22µF	20%	63V
2821	4822 124 41576	2,2µF	20%	50V
2822	4822 126 12882	100nF	20%	50V
2823	4822 124 40246	4,7µF	20%	63V
2824	4822 124 41407	0,47µF	20%	63V
2825	4822 126 13677	39pF	5%	50V
2826	4822 124 41407	0,47µF	20%	63V
2827	4822 124 40433	47µF	20%	25V
2828	4822 124 41579	10µF	20%	50V
2829	4822 121 41856	22nF	5%	250V
2830	4822 122 10319	82pF	5%	50V
2831	4822 121 41856	22nF	5%	250V
2832	4822 124 41576	2,2µF	20%	50V
2833	4822 124 40433	47µF	20%	25V
2834	4822 122 33069	33pF	5%	50V
2835	4822 126 12882	100nF	20%	50V
2836	4822 126 12882	100nF	20%	50V
2837	4822 126 11585	22nF	20%	50V
2838	4822 126 12882	100nF	20%	50V
2839	4822 126 12882	100nF	20%	50V
2840	4822 126 11714	4,7nF	20%	
2841	4822 122 33195	100pF	10%	50V
2842	4822 124 40849	330µF	20%	16V
2843	4822 126 12148	2,7nF	10%	16V
2844	4822 122 33195	100pF	10%	50V

RESISTORS

3130	4822 116 52195	47Ω	5%	0,5W
3139	4822 116 83864	10kΩ	5%	0,5W
3140	4822 116 52297	68kΩ	5%	0,5W
3141	4822 100 20167	50kΩ TRIMPOT. LIN.		
3142	4822 116 52256	2,2kΩ	5%	0,16W
3143	4822 116 52234	100kΩ	5%	0,5W
3144	4822 050 11002	1kΩ	5%	0,2W
3150	4822 116 52238	12kΩ	5%	0,5W

RESISTORS

3151	4822 116 52238	12kΩ	5%	0,5W
3152	4822 116 52283	4,7kΩ	5%	0,5W
3153	4822 116 52283	4,7kΩ	5%	0,5W
3160	4822 116 52195	47Ω	5%	0,5W
3250	4822 116 52224	470Ω	5%	0,5W
3251	4822 116 52224	470Ω	5%	0,5W
3252	4822 116 52238	12kΩ	5%	0,5W
3253	4822 116 52238	12kΩ	5%	0,5W
3254	4822 116 52219	330Ω	5%	0,5W
3255	4822 116 52219	330Ω	5%	0,5W
3256	4822 116 52224	470Ω	5%	0,5W
3257	4822 116 52224	470Ω	5%	0,5W
3258	4822 116 52285	470kΩ	5%	0,5W
3259	4822 116 52213	180Ω	5%	0,5W
3260	4822 116 52264	27kΩ	5%	0,5W
3261	4822 116 52264	27kΩ	5%	0,5W
3262	4822 116 52296	6,8kΩ	5%	0,5W
3263	4822 116 52272	330kΩ	5%	0,5W
3264	4822 116 52245	150kΩ	5%	0,16W
3265	4822 116 52245	150kΩ	5%	0,16W
3266	4822 116 52252	180kΩ	5%	0,5W
3267	4822 116 52252	180kΩ	5%	0,5W
3268	4822 116 52191	33Ω	5%	0,5W
3269	4822 111 30893	4,7MΩ	5%	0,2W
3270	4822 116 52303	8,2kΩ	5%	0,5W
3271	4822 116 52303	8,2kΩ	5%	0,5W
3272	4822 116 52211	150Ω	5%	0,5W
3273	4822 116 52244	15kΩ	5%	0,5W
3274	4822 116 83864	10kΩ	5%	0,5W
3275	4822 116 83864	10kΩ	5%	0,5W
3276	4822 116 52244	15kΩ	5%	0,5W
3277	4822 116 52244	15kΩ	5%	0,5W
3278	4822 116 52283	4,7kΩ	5%	0,5W
3279	4822 116 52284	47kΩ	5%	0,5W
3280	4822 116 52224	470Ω	5%	0,5W
3281	4822 116 52224	470Ω	5%	0,5W
3282	4822 116 52213	180Ω	5%	0,5W
3284	4822 116 52283	4,7kΩ	5%	0,5W
3285	4822 116 52283	4,7kΩ	5%	0,5W
3286	4822 116 52191	33Ω	5%	0,5W
3800	4822 116 52257	22kΩ	5%	0,5W
3802	4822 052 10828 ▲	8,2Ω	5%	0,3W
3804	4822 116 52224	470Ω	5%	0,5W
3805	4822 116 52244	15kΩ	5%	0,5W
3808	4822 050 11002	1kΩ	5%	0,2W
3809	4822 116 52289	5,6kΩ	5%	0,16W
3810	4822 116 52271	33kΩ	5%	0,16W
3811	4822 116 52235	1MΩ	5%	0,5W
3812	4822 116 52269	3,3kΩ	5%	0,5W
3813	4822 116 52175	100Ω	5%	0,5W
3814	4822 116 52257	22kΩ	5%	0,5W
3815	4822 116 52296	6,8kΩ	5%	0,5W
3816	4822 116 52296	6,8kΩ	5%	0,5W
3817	4822 116 52257	22kΩ	5%	0,5W
3818	4822 116 52257	22kΩ	5%	0,5W
3819	4822 116 52235	1MΩ	5%	0,5W
3820	4822 116 52304	82kΩ	5%	0,5W
3821	4822 116 52269	3,3kΩ	5%	0,5W
3822	4822 116 52291	56kΩ	5%	0,5W
3823	4822 116 52244	15kΩ	5%	0,5W
3824	4822 116 52211	150Ω	5%	0,5W
3825	4822 116 83882	39kΩ	5%	0,5W
3826	4822 116 52296	6,8kΩ	5%	0,5W
3827	4822 116 52289	5,6kΩ	5%	0,16W

RESISTORS

3828	4822 116 83864	10kΩ	5%	0,5W
3829	4822 116 83882	39kΩ	5%	0,5W
3830	4822 116 52296	6,8kΩ	5%	0,5W
3831	4822 116 52296	6,8kΩ	5%	0,5W
3832	4822 116 83864	10kΩ	5%	0,5W
3833	4822 116 52257	22kΩ	5%	0,5W
3834	4822 116 52211	150Ω	5%	0,5W
3835	4822 116 52184	18Ω	5%	0,5W
3836	4822 050 11002	1kΩ	5%	0,2W
3837	4822 111 50499	3,3MΩ	5%	0,2W
3838	4822 116 52234	100kΩ	5%	0,5W
3839	4822 117 11825	1,5MΩ	5%	0,4W
3840	4822 050 11002	1kΩ	5%	0,2W
3841	4822 116 52298	680kΩ	5%	0,5W
3842	4822 116 52297	68kΩ	5%	0,5W
3843	4822 116 52231	820Ω	5%	0,5W
3844	4822 116 52291	56kΩ	5%	0,5W
3845	4822 050 11002	1kΩ	5%	0,2W
3846	4822 050 11002	1kΩ	5%	0,2W
3847	4822 116 81682	2,2MΩ	5%	0,5W
3848	4822 116 52252	180kΩ	5%	0,5W
3849	4822 116 52175	100Ω	5%	0,5W
3850	4822 116 52283	4,7kΩ	5%	0,5W
3851	4822 116 52238	12kΩ	5%	0,5W
3852	4822 116 52243	1,5kΩ	5%	0,16W
3853	4822 116 52296	6,8kΩ	5%	0,5W
3854	4822 116 52243	1,5kΩ	5%	0,16W
3855	4822 116 83864	10kΩ	5%	0,5W
3856	4822 116 52271	33kΩ	5%	0,16W
3857	4822 116 52269	3,3kΩ	5%	0,5W
3859	4822 116 83864	10kΩ	5%	0,5W
3860	4822 116 52289	5,6kΩ	5%	0,16W
3861	4822 116 52257	22kΩ	5%	0,5W
3865	4822 050 18208	8,2Ω	1%	0,4W
3868	4822 116 52191	33Ω	5%	0,5W
3876	4822 116 52257	22kΩ	5%	0,5W
3877	4822 116 52257	22kΩ	5%	0,5W
3878	4822 116 52257	22kΩ	5%	0,5W
3879	4822 116 52257	22kΩ	5%	0,5W
3880	4822 116 52202	82Ω	5%	0,16W
3881	4822 116 52257	22kΩ	5%	0,5W
3884	4822 116 83882	39kΩ	5%	0,5W
3886	4822 116 52235	1MΩ	5%	0,5W
3890	4822 050 11002	1kΩ	5%	0,2W
3891	4822 050 11002	1kΩ	5%	0,2W
3892	4822 050 11002	1kΩ	5%	0,2W
3893	4822 050 11002	1kΩ	5%	0,2W
3894	4822 050 11002	1kΩ	5%	0,2W

COILS

5103	4822 157 62552	2,2µH
5104	4822 157 53302	1µH
5105	4822 156 21738	COIL VAR., MW-RF
5106	4822 156 21739	COIL VAR., LW-RF
5120	4822 157 53789	COIL VAR., FM-RF
5125	4822 156 30947	RF COIL 1,5 TURNS
5130	4822 156 21737	COIL VAR., MW-OSC.
5131	4822 156 21737	COIL VAR., LW-OSC.
5140	4822 158 60511	AM-IF FILTER 450kHz
5142	4822 157 70302	AM-IF FILTER 450kHz
5143	4822 242 81154	FILTER KIT, FM-IF
5250	4822 156 20946	OSC.COIL 100kHz
5800	4822 242 81865	CER.RES. 16,93MHz
5802	4822 157 50964	100µH

DIODES

6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
6138	4822 130 30621	1N4148
6139	4822 130 30621	1N4148
6250	4822 130 30621	1N4148
6251	4822 130 30621	1N4148
6252	4822 130 30621	1N4148
6253	4822 130 30621	1N4148
6254	4822 130 30621	1N4148
6802	4822 130 30621	1N4148
6803	4822 130 31554	BZX79-B4V3
6805	4822 130 30621	1N4148
6806	4822 130 30621	1N4148
6807	4822 130 30621	1N4148

TRANSISTORS

7251	4822 130 40937	BC548B
7252	4822 130 44196	BC548C
7253	4822 130 44196	BC548C
7254	4822 130 40937	BC548B
7804	5322 130 60068	BC558C
7807	4822 130 41344	BC337-40
7808	4822 130 44196	BC548C
7810	4822 130 41344	BC337-40

INTEGRATED CIRCUITS

7101 ©	4822 209 32746	TEA5711T/N2, RADIO IC
7250 ©	4822 209 32918	AN7318S, Rec/Pb-AMPLIFIER IC
7800 ©	4822 209 91052	TMP47C421ADF-AZ8050.3
7801 ©	4822 209 90618	SAA7345GP/S5, DECODER
7802 ©	4822 209 32196	TDA1311AT/N2, DAC
7803 ©	4822 209 90496	M62475FP, SERVO PROCESSOR
7805	4822 209 32852	TDA7073A/N2
7806	4822 209 32852	TDA7073A/N2

SURVEY OF CHANGES OF SERVICE MANUAL

4822 725 24954 - AZ8050, AZ8051, AZ8052, AZ8150

Added pages introduced with Service Information A95-352 (not valid for AZ8052/14):

Description	Page/Chapter	Reason
Service Testprogram	3-10	New CD-electronic on COMBI-board 'A3-'
CD-startup procedure	3-11	New CD-electronic on COMBI-board 'A3-'
Abbreviations and pin-description of CD ICs	3-12	New CD-electronic on COMBI-board 'A3-'
Feature/Amplifier-board '1'	5-4	Layout stage .6 added
Feature/Amplifier-board '2'	5-5, 5-6	Layout stage .7 added
COMBI-board	6-6, 6-7, 6-8, 6-9, 6-10, 9-6, 9-7, 9-8	COMBI-board 'A3-' : new schematic diagr., assembly drawings and partslist added
Changes	10-1	Survey of changes added

Introduced with Service Information A95-353:

Separate Service Manual for AZ8052/14 (4822 725 24968) published.

Compact Disc Drive RCD 1.3D

Service
Service
Service

Service Manual

COMPACT
disc
DIGITAL AUDIO

TABLE OF CONTENTS

Exchange instruction for optical pickup unit
Partslist
Service hints
Cleaning the lens

CLASS 1
LASER PRODUCT

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

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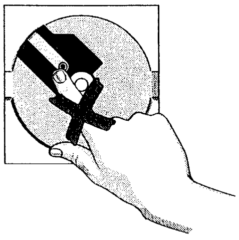
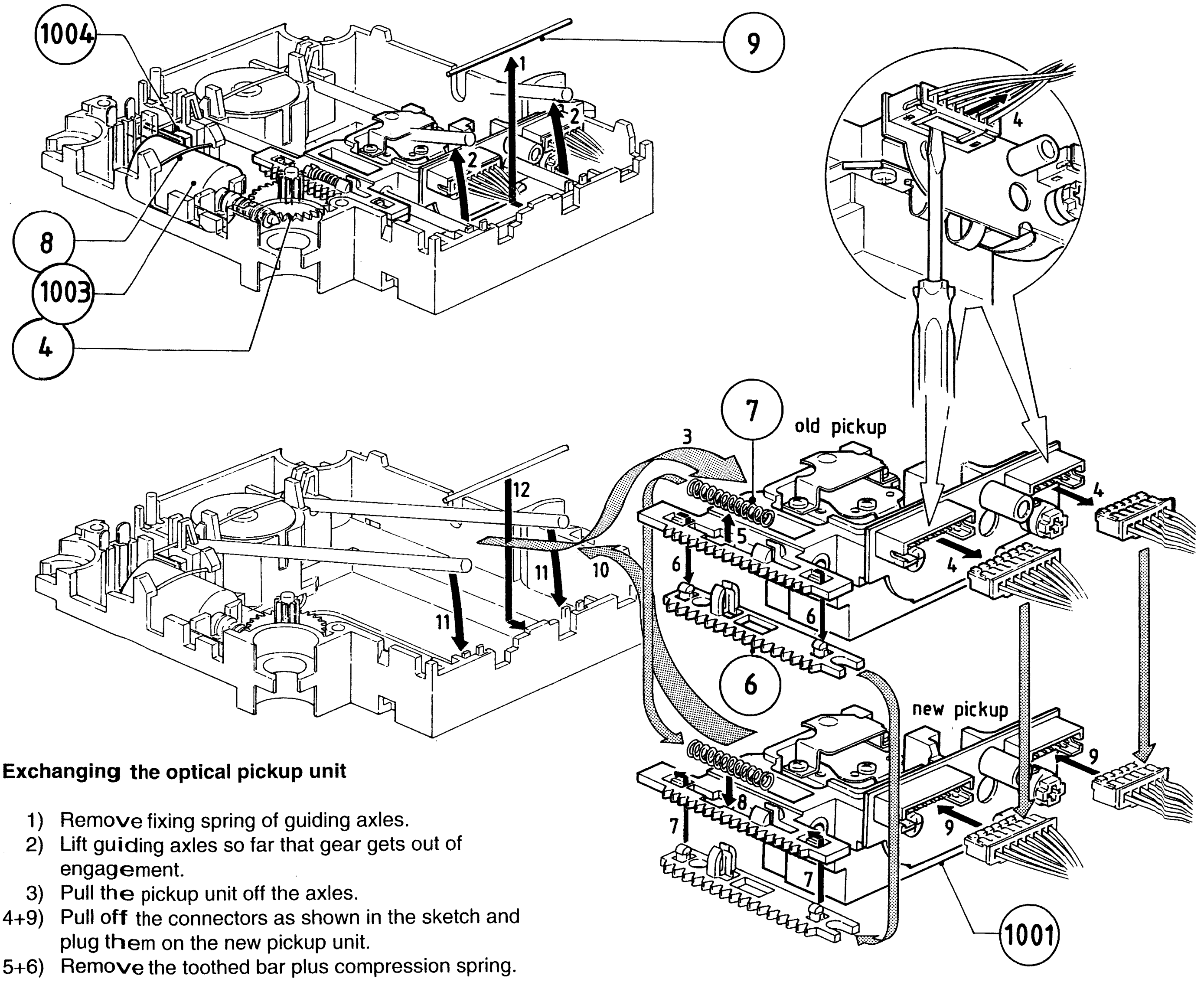
Exchange instruction for the OPTICAL PICKUP unit

WARNINGS: **Danger of electrostatic discharge!**
The laser diode is more sensitive to ESD than MOS ICs.
Therefore take care of ESD-protection whenever working on the disc drive.

Never touch the lens!





Exchanging the optical pickup unit

1) Remove fixing spring of guiding axles.
2) Lift guiding axles so far that gear gets out of engagement.
3) Pull the pickup unit off the axles.
4+9) Pull off the connectors as shown in the sketch and plug them on the new pickup unit.
5+6) Remove the toothed bar plus compression spring.
7+8) Mount toothed bar and compression spring on new pickup unit.
10) Put the new pickup unit on the guiding axles.
11) Put guiding axles down to the chassis while positioning the pickup unit so that gear is forced easily into engagement.
12) Mount fixing spring of guiding axles.

	4822 691 30345	RCD1.3D disc drive assy
4	4822 522 32451	gear wheel
6	4822 522 32453	toothed bar
7	4822 492 51979	spring, compression
8	4822 492 63941	spring, wire (motor)
9	4822 492 63942	spring, wire (axles)
1001	4822 218 30768	optical pickup unit RCD1.3
1003	4822 361 21113	servomotor, RF300C-11440
1004	4822 276 12163	switch, leaf

Only those parts of which a service code number is stated are service parts.

IMPORTANT NOTE:

All electrical adjustments have to be carried out new. Follow the adjustment table of the service manual for the relevant set the disc drive is used.
The laser current has already been adjusted by the factory.

SERVICE HINTS

Service DISC - HOLDDOWN

The disc must always be fixed well on the turntable.
If the mechanism has to be dismounted for repair, a separate disc-holddown has to be used (e.g. service disc-holddown 4822 532 51871).
The CD mechanism then can function normally as in the set.

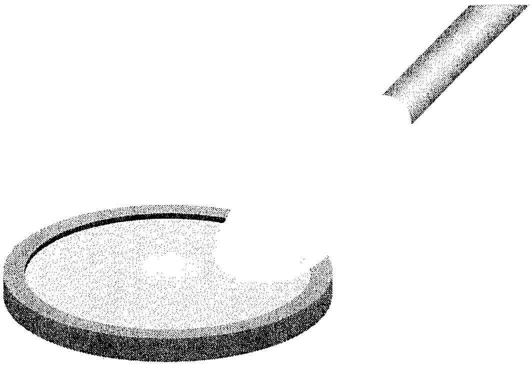
CLEANING the LENS

Principle: Avoid cleaning of the lens !

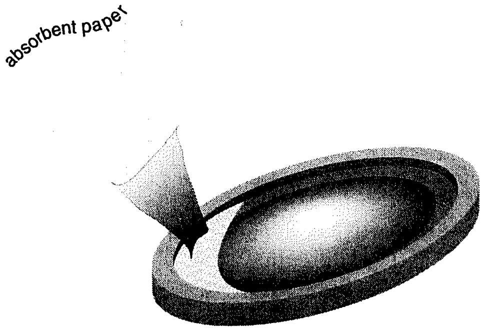
DUST particles are normally no major problem. They can be blown away with oilfree compressed air.

Finger - prints

If the lens is obviously polluted with finger - prints, it can be cleaned with alcohol or spirit.
Take a padstick and tip it into alcohol until it is soaked.
Then clean the surface of the lens by rotating the soaked padstick smoothly.
The alcohol will dissolve the finger - prints, rotation helps mechanically. Finally the lens will be filled with the dirty cleaning solvent.



Now incline the lens (disc drive) and soak the solvent up with absorbent paper.
The remnants of the solvent will evaporate.



REDUCTION of REPAIR PRICE

If the disc drive does not function, in most cases the optical pickup unit will be defect.
To reduce the actual repair price it is recommended to replace the optical pickup unit only.
Follow the exchange instruction on the previous page.

9/98

CD Stereo Radio Recorder

AZ8050
AZ8051
AZ8052

Service
Service
Service

This Service Information is **not** valid for AZ805 . /..D versions of the mentioned type numbers.

A96-358

Product Service Group CE Audio

Service Information

Already published Service Informations: ***A95-352 (4822 725 24965)***

NEW VERSIONS

The new versions **AZ8050/11H, AZ8052/05 and AZ8052/00B** were introduced.

AZ8050/**11H** is equal to AZ8050/01 except for the mains cord.
pos.429 mains cord GB 4822 321 10886

AZ8052/**05** is equal to AZ8052/00 except for the mains cord.
pos.429 mains cord GB 4822 321 10886

AZ8052/**00B** is equal to AZ8052/00 except for the colour of the cabinet. “B” stands for *Blue* cabinet.
As follows the new service code numbers:

pos.402	door cassette assy (blue)	4822 443 10156
pos.406	CD door printed (blue)	4822 443 10154
pos.412	foil ornamental left (blue)	4822 466 11296
pos.419	carrying handle (blue)	4822 498 10549
pos.426	foil ornamental right (blue)	4822 466 11295
pos.434	battery lid (blue)	4822 443 10155

CORRECTION TO THE SERVICE MANUAL

EXPLODED VIEW / drawing 1 (page 8-1)

Description and position numbers 448 (knob slide *MODE*) and 449 (knob slide *BAND*) are interchanged in the Exploded View/drawing 1 of the service manual.
In the partslist the descriptions and the service code numbers are correct.

CORRECTION TO SERVICE INFORMATION A95-352

PARTSLIST COMBI- BOARD “A3-”

For 2816 there was published a wrong value.
correct is: 2816 0,22µF 20% 63V 4822 126 13581

1996-10-12

GB 4822 725 24989

CHANGES IN COURSE OF PRODUCTION

FEATURE / AMPLIFIER - BOARD "2"

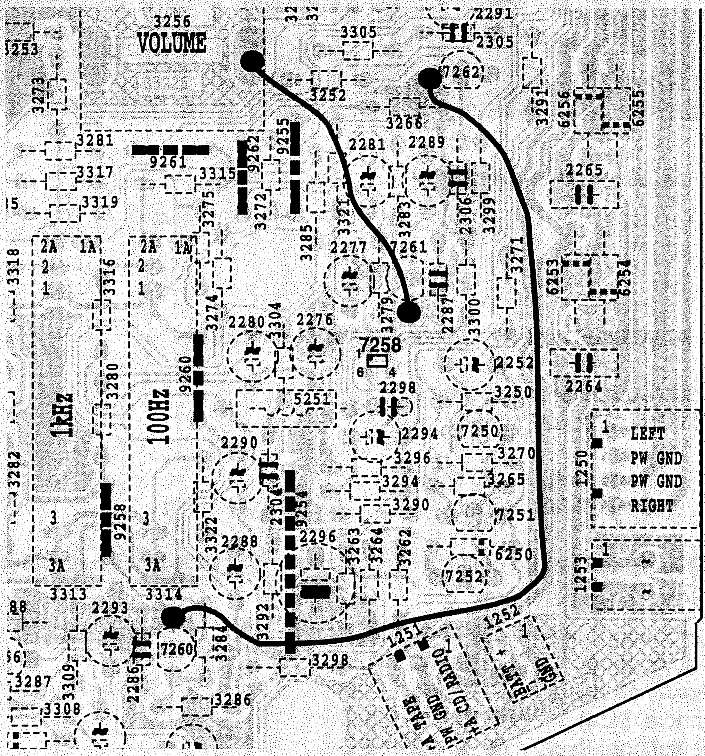
valid for AZ8052 only

* **Symptom: Crackling noise (servo noise) is audible in the left speaker during CD-play-mode.**

Cure: Add 2 wire connections as shown in picture below: 1 wire from ground of potmeter 3256 to Emitter 7261.
1 wire from Emitter 7262 to Emitter 7260.

Remark: Phenomenon occurs only in sets with layout stage .5 of Feature / Amplifier - board "2".
From approximately production week 9531 onwards the 2 wires have been implemented in production.

copperside view

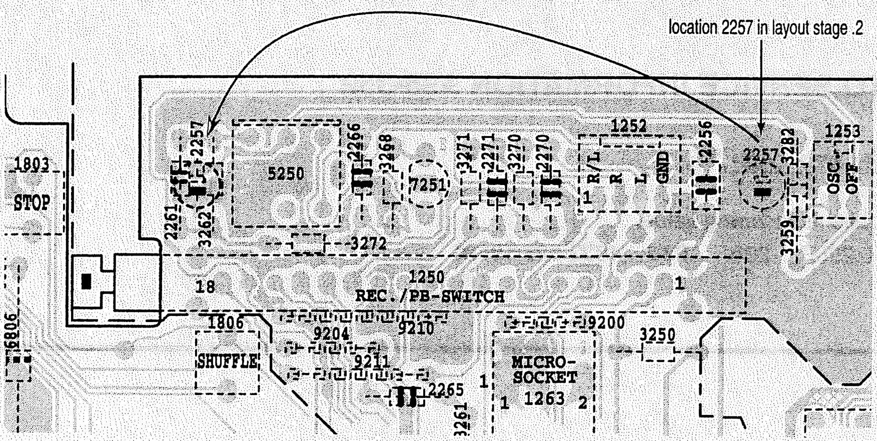

3256
VOLUME
3253
3305
2291
2305
7262
3252
3266
3273
3281
9261
3317
3315
9262
9255
2281
2289
3291
6256
6255
3319
3275
3272
3321
3283
2306
3299
2265
3318
2A
1A
3316
3285
2277
7261
3271
6253
6254
3274
2280
3304
2276
3279
2287
3300
1kHz
3280
100Hz
9260
7258
2252
2264
5251
2298
3250
2294
7250
3270
3282
2290
3296
3294
3265
1250
LEFT
PW GND
PW GND
RIGHT
9258
3290
7251
2288
2296
3263
3264
3262
6250
3322
7252
1253
3313
3314
2293
3292
1252
BATT +
GND
2286
7260
3284
3298
1251
TAPE
GND
RADIO
CD
PW
+A
3287
3309
3308
3286

COMBI - BOARD "A3-"

* **From production week 9630 onwards layout stage .3 has been implemented.**
(The layout stage can be identified by the last digit of the 12-figure number, printed in the copper pattern)

reason: 2257 moved next to bias oscillator coil 5250 (2257 was handsoldered directly onto 5250)

copperside view


location 2257 in layout stage .2

1803
STOP
2257
2261
3262
5250
2266
3268
7251
3271
2271
3270
2270
1252
R/L
R
L
GND
2256
3282
1253
OSC - OFF
3259
3272
1250
18
1
REC./PB-SWITCH
1806
SHUFFLE
9204
9210
9211
9200
3250
MICRO-
SOCKET
1263
2265
3261
6806

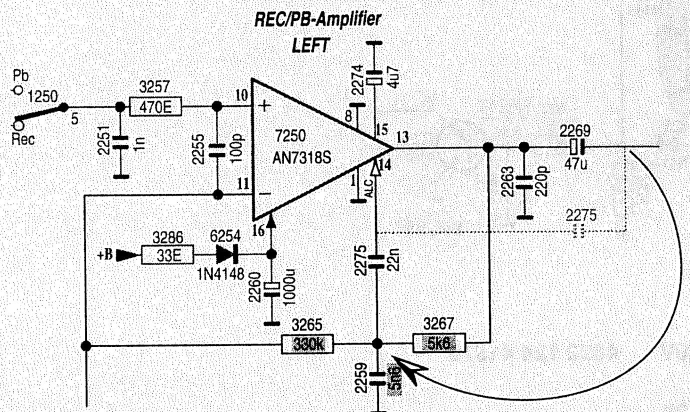
* **Symptom: Recording is unstable when recordings are made from a CD with high level variations (e.g. classical music)**

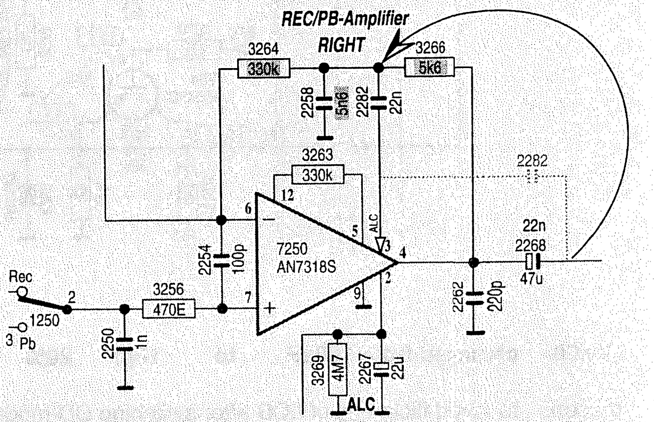
Cure:	change	2258	from	390pF	to	5,6nF	4822 126 13098
		2259	from	390pF	to	5,6nF	4822 126 13098
		3264	from	150k	to	330k	4822 116 52272
		3265	from	150k	to	330k	4822 116 52272
		3266	from	180k	to	5,6k	4822 116 52289
		3267	from	180k	to	5,6k	4822 116 52289

connect 2282 from pin 3 of IC7250 to junction 2258/3264/3266
connect 2275 from pin14 of IC7250 to junction 2259/3265/3267

Remark: Problem is caused by high notes when the ALC-capacitor is charged to a level near to the operating threshold. Because of the recording pre-emphasis the recording amplifier has high amplification for the high notes. Feedback of the ALC-signal directly from the IC output intensifies the problem.

From production week 9626 onwards the above modification has been implemented as rework. The layout is adapted with layout stage .4 of COMBI-board "A3-".


REC/PB-Amplifier
LEFT
Pb
1250
Rec
5
3257
470E
2251
1n
2255
100p
10
11
+
−
7250
AN7318S
2274
4u7
8
15
13
1
ALC
14
16
2269
47u
2263
220p
2275
+B
3286
33E
6254
1N4148
2260
1000u
2275
22n
3265
330k
3267
5k6
2259
5n6

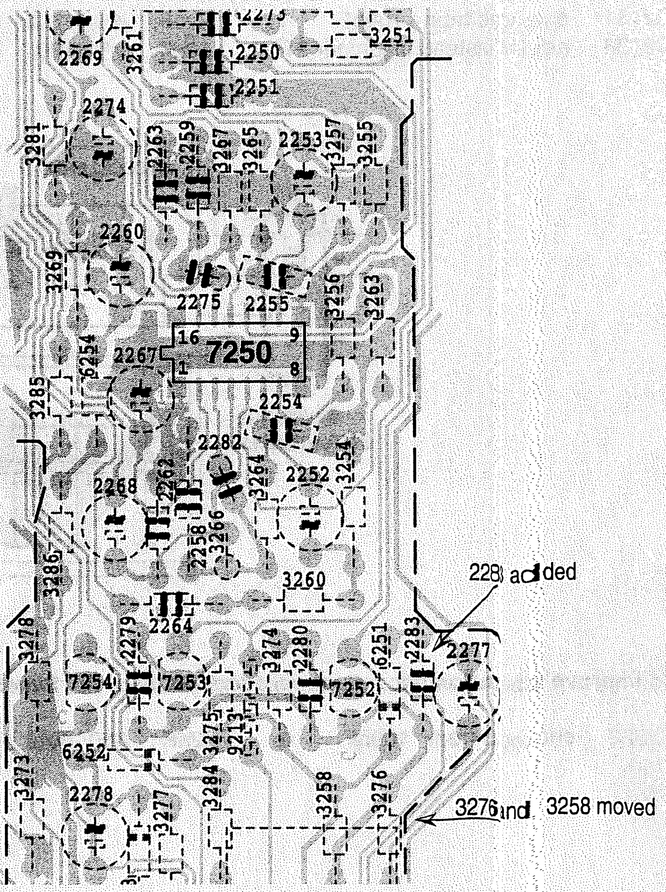

REC/PB-Amplifier
RIGHT
3264
330k
3266
5k6
2258
5n6
2282
22n
3263
330k
12
2282
6
−
+
7
7250
AN7318S
5
ALC
3
4
2
9
2254
100p
Rec
1250
2
3
Pb
3256
470E
2250
1n
3269
4M7
2267
22u
ALC
2262
220p
22n
2268
47u

* **From production week 9642 onwards layout stage .4 has been implemented.**
(The layout stage can be identified by the last digit of the 12-figure number, printed in the copper pattern)

reason: layout adapted to changed ALC circuit.

changed area: REC/Pb-amplifier layout stage .4

2275 connected to junction 2259/3265/3267
2282 connected to junction 2258/3264/3266


2283 added

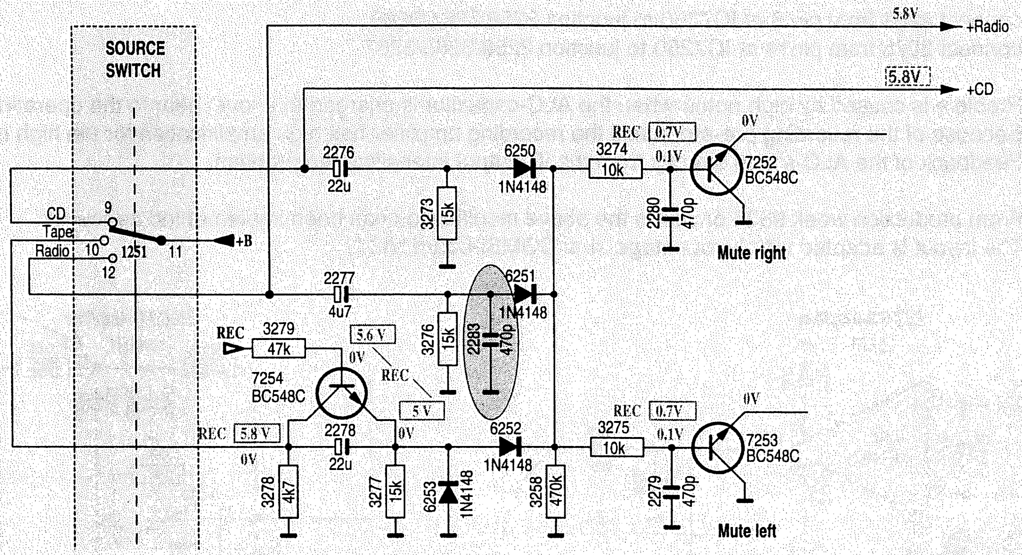
3276 and 3258 moved
2269
3261
2273
3251
2250
2251
2274
3281
2263
2259
3267
3265
2253
3257
3255
2260
3269
2275
2255
3256
3263
6254
2267
16
1
7250
9
8
3285
2254
2282
3264
2252
3254
2268
2262
2258
3266
3286
3260
3278
2279
2264
3274
2280
6251
2283
2277
7254
7253
7252
3273
6252
3275
9213
3284
3258
3276
2278
3277

*** C2283 added 470pF 10% 50V 4822 122 33519**

reason: to improve immunity to interference.

The layout is adapted with layout stage .4 of COMBI-board “A3-” (see previous page).

COMBI BOARD
RECORDER/SOURCE SELECTOR PART

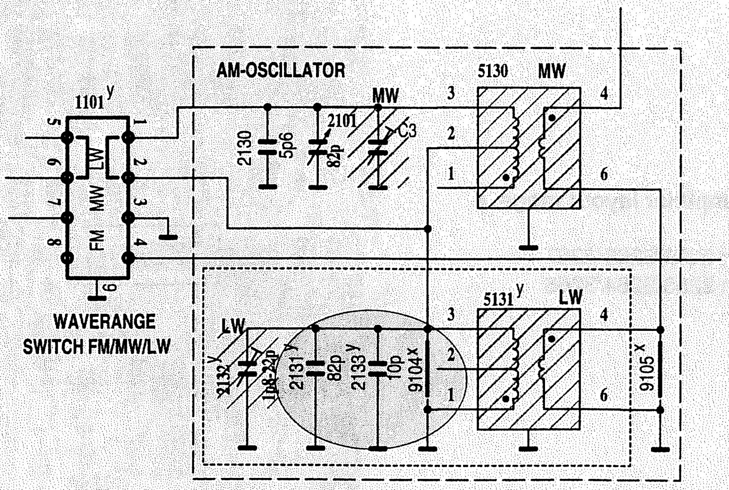

SOURCE SWITCH
5.8V
+Radio
5.8V
+CD
CD
Tape
Radio
9
10
11
12
1251
+B
2276
22u
6250
1N4148
3273
15k
REC
0.7V
3274
10k
0.1V
0V
7252
BC548C
2280
470p
Mute right
2277
4u7
6251
1N4148
3276
15k
2283
470p
REC
3279
47k
5.6 V
0V
REC
7254
BC548C
5 V
REC
5.8 V
0V
2278
22u
0V
6252
1N4148
3278
4k7
3277
15k
6253
1N4148
3258
470k
REC
0.7V
3275
10k
0.1V
0V
7253
BC548C
2279
470p
Mute left

*** C2800 changed from 100µF to 10µF 20% 50V 4822 124 41579**

reason: to avoid flickering of LCD after switching CD-mode on.

*** For easier alignment of the limit frequencies of the Longwave-range**

C2131	changed from 100pF	to	82pF	5%/N750	50V	4822 126 13992
C2133	added instead of jumper 9104		10pF	5%/NP0	50V	4822 122 33847


AM-OSCILLATOR
1101 y
5
6
7
8
1
2
3
4
9
LW
MW
FM
WAVERANGE SWITCH FM/MW/LW
2130
5p6
2101
82p
MW
C3
5130
MW
3
2
1
4
6
LW
2132 y
1p8-22p
2131 y
82p
2133 y
10p
9104 x
5131 y
LW
3
2
1
4
6
9105 x

*** To improve the *automatic adjustment procedure* of the Servo Processor IC 7803**

C2822 changed from 100nF to 22nF +80/-50% 25V 4822 126 11585

4948

AZ8050, AZ8051, AZ8052, AZ8150

A95-352

Service
Service
Service

Product Service Group CE Audio

Service Information

Already published Service Informations: ***A95-353*** *(valid for AZ8052/14 only)*

GENERAL

AZ8052/14: With Service Information A95-353 a separate Service Manual (4822 725 24968) has been published for this version.

NEW VERSIONS

The new versions AZ8051/11, AZ8051/12 and AZ8051/01B were introduced.

/11 is equal to /01 except printing on packaging.
/12 is equal to /01 but used for local production India.

/01B is equal to /01 except colour of cabinet. „B“ indicates *Blue* cabinet.
As follows the new service code numbers:

pos. 402	door cassette assy (blue)	4822 443 10156
pos. 406	CD door printed (blue)	4822 443 10154
pos. 412	foil ornamental left (blue)	4822 466 10744
pos. 419	carrying handle (blue)	4822 498 10549
pos. 426	foil ornamental right (blue)	4822 466 10743
pos. 434	battery lid (blue)	4822 443 10155

Production of all 3 new versions starts with Feature/Amplifier-board ‘1’ layout stage .5 and Combi-board ‘A3-’.
For repairs use Service Manual 4822 725 24954 and this Service Information A95-352.

CHANGES IN COURSE OF PRODUCTION

FEATURE/AMPLIFIER - BOARD ‘1‘ valid for AZ8050, AZ8051 and AZ8150

From production week 9539 onwards layout stage **.5** was introduced.

From layout stage .5 onwards there are following changes implemented:
Improvement of stabilizing circuit ***+B***

2270	added	100µF	4822 124 41584	3263	changed to	560Ω	4822 116 52226
3252	changed to	2,2kΩ	4822 116 52256	3264	changed to	390Ω	4822 116 52222
3261	added	10kΩ	4822 116 83864	3270	changed to	470Ω	4822 116 52224
3262	changed to	470Ω	4822 116 52224	6250	changed to	BZX79B3V3	5322 130 31504

1995-11-30

GB 4822 725 24965

Improvement of Immunity to Radiation

2256, 2257	changed to	220pF	4822 122 10466
2262, 2263	added	680pF	4822 122 33169
2274, 2275	added	220pF	4822 122 10466
3259, 3260	changed to	68Ω	4822 116 52199
3274, 3275	added	2,2kΩ	4822 116 52256

Correction of documentation

2250, 2251	changed to	1,5nF	4822 126 12878

Reduction of hum-modulation

2273	added	100nF	5322 121 42386

For the actual Schematic Diagram and Assembly Drawing see annexed sheet 5-4.
Note: The Assembly Drawing published in this Service Information shows layout stage .6.
Difference to stage .5 is only a formal update of the code number in the copper pattern.

FEATURE/AMPLIFIER - BOARD '2'

valid for AZ8052 only

* **From production start onwards following changes are implemented as rework on layout stage .5:**

reason: *improvement of Immunity to Radiation and stabilized voltage **+B**, Reduction of Hum-modulation and Distortion*

2253	added	100nF	5322 121 42386
2273, 2274	added	820pF	4822 126 10178
3261	added	10kΩ	4822 116 83864
3310, 3311	added	10kΩ	4822 116 83864

* **From production week 9550 onwards layout stage .7 will be introduced.**

From layout stage .7 onwards following additional changes are implemented:

reason: *to improve sound and THD (Total Harmonic Distortion)*

3254, 3255	deleted		
3266, 3267	changed to	4,7kΩ	4822 116 52283
3272, 3273	changed to	4,7kΩ	4822 116 52283
3274, 3275	changed to	820Ω	4822 116 52231
3283, 3284	changed to	220kΩ	4822 116 83874
3285, 3286	changed to	2,2kΩ	4822 116 52256
3306, 3307	added	68kΩ	4822 116 52297
3319, 3320	changed to	8,2kΩ	4822 116 52303
3321, 3322	changed to	4,7kΩ	4822 116 52283

For the actual Schematic Diagram and Assembly Drawing see annexed sheets 5-5 and 5-6.

COMBI - BOARD

valid for AZ8050, AZ8051, AZ8150, AZ8052/00 (not for /14)

From October 1995 (approx. production week 9540) onwards COMBI-board ***'A0'*** with DSIC2 servoprocessor and external HF-amplifier was changed to the new developed COMBI-board ***'A3-'*** with selfadjusting analog servoprocessor IC M62475 with integrated HF-amplifier.

For new Service Testprogram, Startup-procedure, pin-description of CD ICs, schematic diagrams, assembly drawing and partslist see annexed sheets 3-10, 3-11, 3-12, 6-6, 6-7, 6-8, 6-9, 6-10, 9-6, 9-7 and 9-8.
Schematic diagram of *Recorder/Source selector part* remains the same.